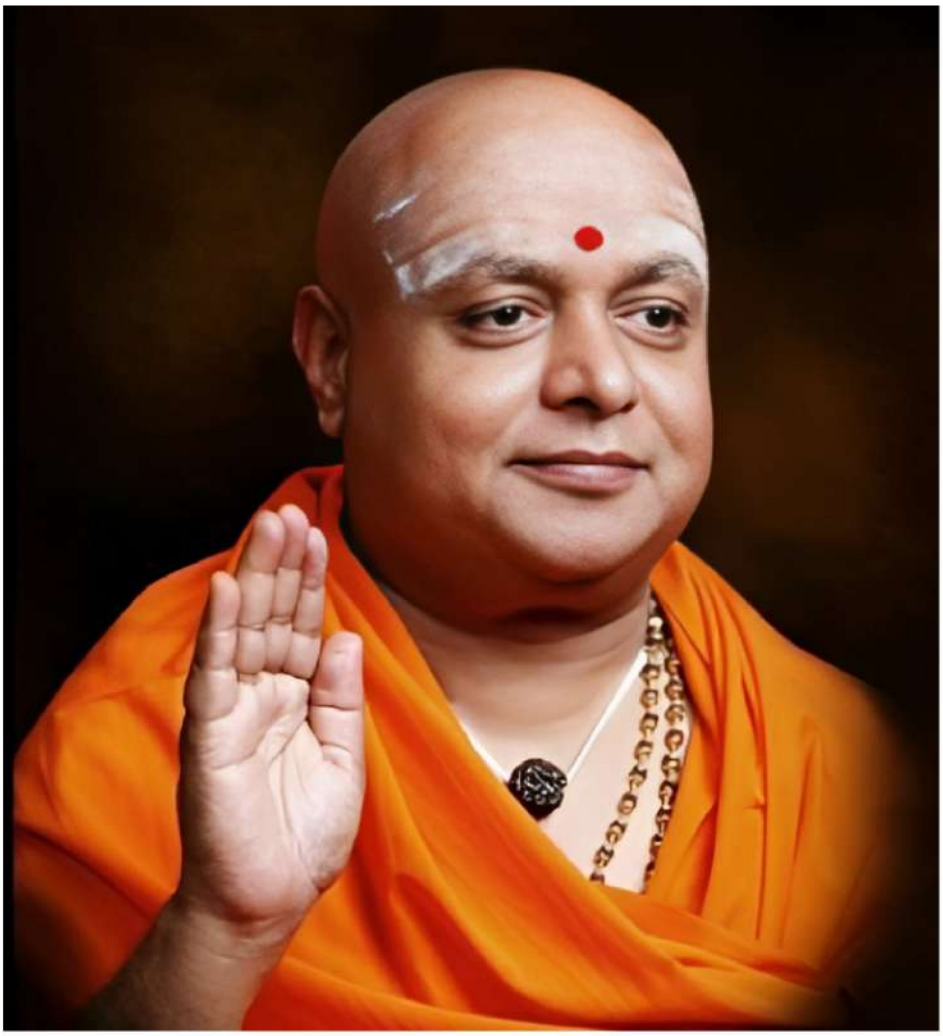
| Jai Sri Gurudev |

FACULTY OF NURSING

ADICHUNCHANAGIRI COLLEGE OF NURSING

RESEARCH COMPENDIUM 2022-2023

|| Jai Sri Gurudev ||

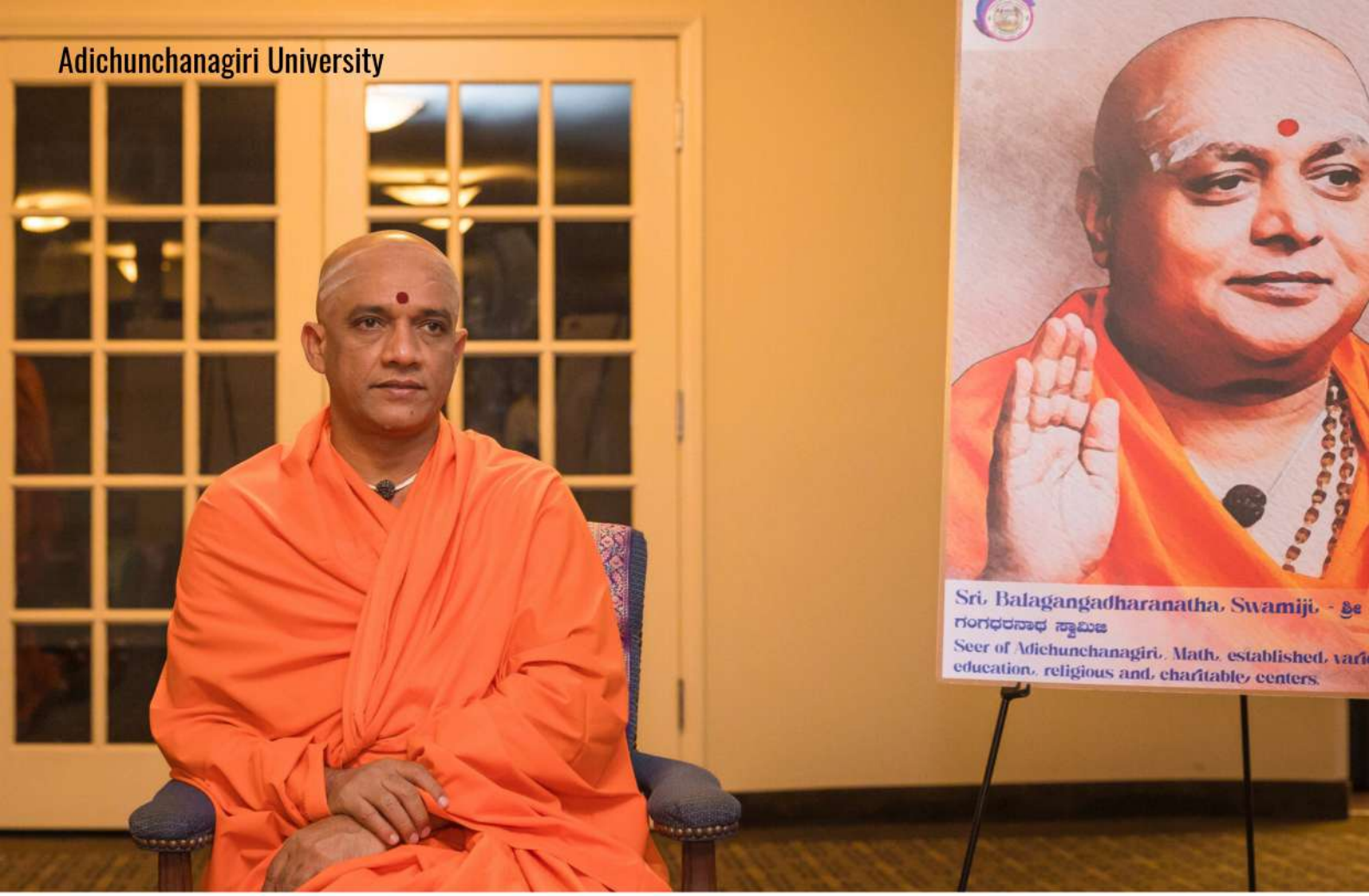


Sri Sri Sri Dr. Balagangadharanatha Mahaswamiji assumed the holy chair of Sri Adichunchanagiri Mahasamsthana Math in 1974. Poojya Mahaswamiji was truly an enlightened soul. He treated all the people alike without discriminating on the basis of caste, creed, gender or social status. His approach towards handling different problems was truly scientific and logical. He implicitly understood the importance of education to the masses in alleviation of poverty.

Poojya Mahaswamiji was a great visionary with a perfect blend of science and spirituality. He was primarily instrumental in establishing Sri Adichunchanagiri Shikshana Trust that runs more than 500+ Educational institutions catering for about 130000 students across the country to impart quality education from primary to Professional Courses with a special focus on young people of semi-urban and rural areas.

Mahaswamiji had a vision of serving the humanity in eight fold areas of Adhyathmika (Spirituality), Anna (Free Food), Akshara (Knowledge), Arogya (Health), Ashraya (Shelter), Anukampa (Helping Hands), Aranya (Afforestation), Akalu (Cattle Protection) was exemplary and noteworthy.

He was rewarded and conferred with innumerable titles for his services in the field of Education, Health, Spiritual, Moral, Social, Cultural and Environmental activities. Most prominent among them are “Padma Bhushan, Doctor Honoris Causa, Saadhanaacharya, Akshaya Santha Sanatana, Dharmarathna, Seva Soorya, Vidya Samrat, Parisara Rathna, Abhinava Vivekananda, Rashtriya Ekatha Prashasthi” and so on.



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Continuing the Legacy of Enlightenment and Service

His Holiness Jagadguru Sri Dr. Nirmalanandanatha Mahaswamiji anointed as the 72nd Pontiff of Adichunchanagiri Mahasamsthana Math as successor to his Guru, Sri Sri Sri Dr. Balagangadharanatha Mahaswamiji in the year 2013.

Poojya Mahaswamiji, unlike many other youngsters, had an inclination towards Spirituality, Science and Service rather than Materialism. He adapted an ascetic life in 1998 and underwent formal training in the traditional knowledge systems. His unquenchable thirst for knowledge is evident from his attitude in conferences and functions wherein he listens to the discourses on Vedas, Upanishads and other Shastras like an eager young student.

Poojya Mahaswamiji, aided by his educational background and interest in Engineering has incorporated Modern Technologies and revolutionized the functioning of all the Institutions of Shikshana Trust. He has taken up the initiative of introducing a computerized working environment in all the Academic and Administrative activities of the institutions.

The Vision of Poojya Mahaswamiji is to follow the footsteps of his Guru, working tirelessly to “Preserve, Promote, Pursue and Progress with Passion in the Path of his Patriarch”. His Holiness was conferred with “Doctor Honoris Causa” (Honorary Doctor of Science) by the University of Mysore, Karnataka in 2016.

Principals Message

It gives me great pleasure to introduce the Research Compendium prepared by our esteemed College of Nursing Research Cell. Research forms the cornerstone of our academic pursuits, driving innovation, excellence in practice, and advancement in healthcare.

As educators and researchers, we recognize the importance of fostering a research culture that encourages curiosity, critical thinking, and collaboration. This Compendium not only provides practical guidance on research methodologies, ethical considerations, and academic writing but also inspires a passion for inquiry-driven learning.

I encourage all students and faculty to utilize this Compendium to its fullest extent, embracing research as a powerful tool for shaping the future of nursing practice. Let us embark on this journey of discovery together, knowing that each contribution to research brings us closer to our collective goal of improving patient outcomes and advancing healthcare

Prof. Chandrashekar H C
Dean & Principal
Faculty of Nursing
ACU

Vice principal message

Research is the cornerstone of our profession, driving innovation and excellence in healthcare. This manual serves as a comprehensive guide to support your research endeavours, providing essential resources and guidelines to navigate the research process effectively.

I commend our Research Cell for their dedication in compiling this invaluable resource. Whether you are embarking on your first research project or expanding your scholarly pursuits, this manual aims to empower you with the knowledge and tools necessary for success.

I encourage you to embrace the spirit of inquiry and collaboration as you contribute to advancing nursing science and improving patient care. Together, let us continue to push the boundaries of knowledge and make a meaningful impact in healthcare.

Prof. Victoria Sarvand
Vice-Principal
Faculty of Nursing

Research coordinator

I am thrilled to introduce this essential tool, meticulously crafted by our esteemed Research Cell. This manual embodies our commitment to fostering a culture of rigorous inquiry and innovation in nursing research.

Within these pages, you will find comprehensive guidance on navigating the intricacies of research—from formulating research questions to conducting methodologically sound studies and effectively communicating your findings. It serves as a roadmap to empower you in your research pursuits, whether you are embarking on your first project or advancing an ongoing investigation.

Our goal is to support and inspire you as you contribute to the evidence base that shapes nursing practice and improves patient outcomes. As Research Coordinator, I encourage you to utilize this manual to its fullest extent, leveraging its resources and insights to propel your scholarly journey forward.

I extend my sincere thanks to all who have contributed to this invaluable resource. Your dedication and expertise have made this manual a testament to our collective commitment to excellence in nursing research.

Dr. Komala H K
Research Coordinator
Faculty of nursing
ACU

2022-23

Sl.No	**Title of paper**	**Name of the author/s**	**Department of the teacher**
1	A review article on Orthorexia nervosa	Ms.Smitha, Mrs.Arathi T V, Mr.Hemanth C K	Child Health Nursing
2	Review Article on PPIUCD	Ms.Poornima C G, Mrs.Ashwini K ,M, Mrs.Victoria Sarvand, Mrs.Kavitha N K, Mrs.Ramya R	OBG Nursing
3	A Comprehensive Review Article On 5 F'S of Disease Transmission	Nikil J V, Chandrashekar H C, Swami P.G.N, Komala H.K, Balaji M.S, Keshavamurthy C.D	Community Health Nursing
4	Review an Article on Examination Stress	Nisha dhiryan, Mr.Chethan S, Prof. Keshavamurthy CD, Prof. Chandrashekar H C	Mental Health Nursing
5	Costard's delusion dead man's sketch	Victoria Sarvand	OBG Nursing
6	Myths & facts regarding diet in pregnancy- A servey review	Victoria Sarvand	OBG Nursing
7	Pedophilia social shame at present	Victoria Sarvand	OBG Nursing
8	White room torture A sensory denial methods which obliterates all sense of realism	Victoria Sarvand	OBG Nursing
9	A study to assess the effectiveness of Structured Teaching Program knowledge regarding hand exercises in prevention of AV fistula dysfunction among haemodialysis patients in selected hospital	Shilpa Rani R, Eshwarappa S, Dayanand C, Balaji M S, Geethanjali S	Medical Surgical Nursing

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10	Effectiveness of Nurse-Led Educational Intervention on Knowledge Regarding Management of Chronic Kidney Disease among Patients	Kadabahalli Rajanna Shobha, Larissa Martha Sams, Judie Arulappan, Hanan Fahad Alharbi	Medical Surgical Nursing
11	Perineotomy Care After Childbirth	Mrs. Bushra Sardar.B, Mrs.Victoria Sarvand, Mrs.Ashwini K M, Mrs.Ramya. R Mrs.Kavitha N K	OBG Nursing
12	Road Accidents Safety Among Teenagers	Ms. Komala H K, Dr. Krishna Chauhan	Community Health Nursing
13	Spirometry:Best friend for healthy lungs	Theja B C, Prof. Shobha K R, Prof. Keshavamurthy C D, Prof. Chandrashekar H C.	Medical Surgical Nursing
14	The COPD and drawbacks of Non-invasive Ventilation in the treatment of COPD patients	Theja B C, Prof. Shobha K R, Prof. Keshavamurthy C D, Prof. Chandrashekar H C.	Medical Surgical Nursing
15	A Renal replacement Therapy: Patient friendly procedure	Mrs. Rashmi S, Prof. Shobha K R, Prof. Keshavamurthy C D, Prof. Chandrashekar H C	Medical Surgical Nursing
16	Sheehans Syndrom	Ms.Smitha, Mrs.Arathi T V, Mr. Keshavamurthy C D, Mr.Chandrashekar H C	Child Health Nursing
17	C-Section Scar: Self Massage Techniques	Mrs.Bushra Sardar.B, Mrs.Victoria Sarvand, Mr. Keshavamurthy C D, Mr.Chandrashekar H C	OBG Nursing
18	Cord Blood Banking	Ms.Poornima C G, Mrs.Ashwini K M, Mr.Keshavamurthy C D, Mr.Chandrashekar H C	OBG Nursing
19	Nourishment For Kidneys; Renal Diet	Mrs. Rashmi S, Prof. Shobha K R, Prof. Keshavamurthy C D, Prof. Chandrashekar H C	Medical Surgical Nursing
20	A Review Article on Sperm Banking:(CRYO BANK)	Nikil J V, Chandrashekar H C, Swami P.G.N, Komala H.K, Balaji M.S, Keshavamurthy C.D	Community Health Nursing

21	Evaluate the Effectiveness of Planned Teaching Programme on Knowledge Regarding Impact of Tobacco use Among Adolescents in Selected Pu Colleges at Nagamangala (Tq) Mandya (District)	Mr. Prathap kumar M R, Prof. Keshavamurthy C D, Chethan B S, Prof. Chandrashekar H C	Mental Health Nursing
22	Review an Article on the Impact of Mass Media on Tobacco Use Among Youths	Mr.Prathap kumar M R, Prof.Keshavamurthy C D, Chethan B S, Prof.Chandrashekar H C	Mental Health Nursing
23	A Review Article on Pulmonary Hygiene for Covid-19 A Recovered Patients	Afshan firdose, Dr. Balaji M S, Shobha K R, Keshavmurthy C D, Divyashree	Medical Surgical Nursing
24	A Panaromic Review Article on Effect of Therapeutic Plasma Exchange During COVID-19 Associated Pneumonia	Afshan Firdose, Dr. Balaji M S, Prof. Shobha K R	Medical Surgical Nursing

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A REVIEW ARTICLE ON ORTHOREXIA NERVOSA

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ABSTRACT

By American doctor Steven Bratman, M.D., in 1997. He made the argument that some people's dietary restrictions, which are meant to promote health, may paradoxically have the opposite effect, resulting in unhealthy side effects like social isolation, anxiety, the inability to eat in a natural, intuitive way, a decrease in interest in the full range of other healthy human activities, and, in rare instances, severe malnutrition or even death.[1] The incidence rate per 100 000 person-years was 13.7 (95% CI 12.9-14.5) overall, 25.7 (95% CI 24.1-27.3) for females, and 2.3 (95% CI 1.8-2.8) for males. The fact that orthorexia nervosa does not disproportionately impact one gender is another way in which it differs from anorexia nervosa. According to studies, there are no appreciable variations in the prevalence of orthorexia nervosa between men and women. Psychotherapy or medication are typically used to treat orthorexia.

INTRODUCTION

Orthorexia nervosa, which literally translates to "fixation on righteous eating," is a condition where a person has a "unhealthy obsession" with otherwise healthy eating. Orthorexia begins as a sincere effort to eat healthier, but orthopraxis end up obsessing over the quality and purity of their food. They become preoccupied with decisions about what to eat, how much to eat, and how to handle "slip-ups.[2]". Orthorexia is difficult to understand and has several facets. Sometimes there is a connection between orthorexia and other illnesses, like obsessive-compulsive disorder (OCD) and other eating disorders.

Definition: The systematic avoidance of particular foods by a person with a medical condition who believes those foods to be dangerous.

Prevalence of Orthorexia: Orthorexia has not been extensively researched compared to other eating disorders because it is not yet recognised as a medical disease. According to a few studies, orthorexia affects anywhere from 1% to 7% of the general population. The rise of social media is probably to contribute to the current rise in orthorexia prevalence.

- **Male versus female orthorexia**: Although more research is needed to determine the prevalence in both categories, women are more likely than males to experience orthorexia. In general, marketing initiatives and the media tend to place a greater emphasis on women's health and attractiveness than on men's. Women are consequently considerably more likely to develop eating disorders such as binge eating disorder, bulimia nervosa, and anorexia nervosa.

- **Orthorexia Among undergrads:** College students are particularly prone to orthorexia. According to one study, nearly 25% of university students exhibit orthorexia-related symptoms. A student's likelihood of acquiring orthorexia may rise depending on the kind of programme they are enrolled in. When compared to subjects not linked to health or fitness, those who study those topics are much more likely to acquire orthorexia. For instance, one study discovered that up to 85% of students enrolled in an exercise science programme had orthorexia symptoms.

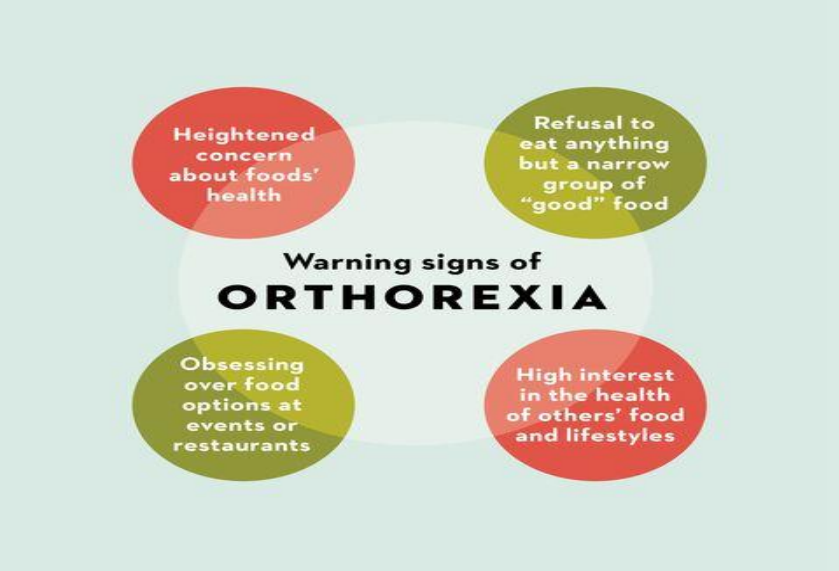
- **Orthorexia in Sports stars:** Orthorexia is fairly typical among sportsmen. Those that value fitness may be the group most likely to experience this disease. Strict diets that only permit the eating of wholesome or "clean"

foods go hand in hand with a focus on physical fitness and wellbeing. It is estimated that 52% of non-professional athletes, including those who frequently use the gym, have orthorexia. Orthorexia is particularly prevalent among those who engage in specialised activities that prioritise healthy lifestyles. For instance, a research found that up to 86% of yoga instructors surveyed had orthorexia symptoms.[3]

CAUSES

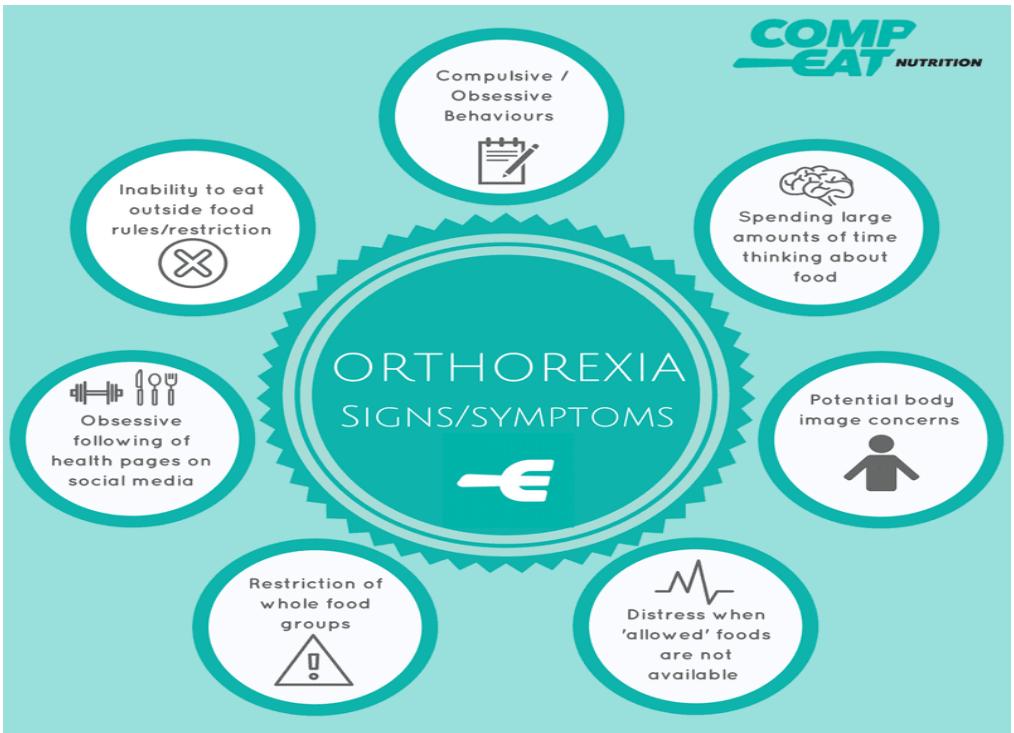
Past traumatic experiences; unhealthy relationships; unresolved personal issues; low self-esteem; perfectionism; a history of dieting; substance misuse; and an obsession with exercise, The overwhelming expectations of society, unresolved childhood trauma, depression, anxiety, bullying, fixation with social media, and a strong desire to "fit in[4]"

Warning signs of orthorexia nervosa



Signs and symptoms

- Worry about food quality.
- Avoid going out to eat or avoid eating food prepared by others
- Fear sickness.
- Show physical signs of malnutrition.
- Bury yourself in food research.
- Refuse to eat a broad range of foods.
- Fear losing control.
- Be overly critical of your friends' food choices.
- Find yourself in a vicious circle.[5]



Orthorexia and Associated Disorders

An eating disorder can frequently be influenced by mental health conditions including depression and anxiety. Orthorexia symptoms often overlap with those of other mental health issues, including anxiety and obsessive-compulsive disorder (OCD). Orthorexia frequently co-occurs with other eating disorders, mental health illnesses, and substance use disorders because of the shared underlying characteristics of these mental health conditions.

Orthorexia and other eating disorder

Orthorexia frequently coexists with other eating disorders. Orthorexia shares many symptoms with anorexia and bulimia, despite the fact that there are numerous significant variances between the various eating disorders. These similarities include.

- Guilt for dietary infractions (cheating on a diet)
- Anxiety relating to health
- Mental suffocation
- Working memory issues
- Self-image issues

Orthorexia and OCD

Numerous symptoms shared between orthorexia and OCD include.

- Increased anxiety
- The requirement for control
- Perfectionism
- Contamination worries
- Repetitive patterns
- Continuous, unpleasant thoughts

Treatment and Prognosis

Orthorexia sufferers can, fortunately, receive assistance, much like those with other eating problems. There is currently no established clinical treatment protocol for the disorder because it is still a relatively new condition in the medical field. But many medical practitioners approach the problem in a manner similar to how they approach anorexia. Fortunately, people with orthorexia can get help, just like people with other eating disorders. Since the ailment is still a relatively recent development in the medical community, there is currently no recognised therapeutic treatment regimen for it. However, a lot of medical professionals handle the issue in a way that is comparable to how they approach anorexia.

Often, cognitive behavioural therapy can be used to treat orthorexia. A qualified counsellor can impart beneficial ways of thinking about managing stress and eating. Anti-anxiety drugs can also be beneficial. When addiction or another mental health disease co-occurs with orthorexia, intensive inpatient treatment that addresses both disorders may be required. For more information about your treatment choices if you or a loved one has co-occurring orthorexia and a substance use problem, get in touch with The Recovery Village. To begin, contact a representative right away.

The following are examples of common therapies

• Exposure and response prevention: The more you are exposed to the anxiety-inducing circumstance, the less it will disturb you.

• Behaviour modification: Recognizing the detrimental impacts of your behaviour so that you can alter it

• Cognitive restructuring or cognitive reframing, which enables you to recognise stress-inducing behaviours and beliefs and swap them out for more flexible viewpoints and behaviours.

• A variety of relaxation techniques, including yoga, guided imagery, mindfulness meditation, and breathing exercises.

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REVIEW ARTICLE ON PPIUCD

Obstetrics & Gynaecology

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ABSTRACT

The intrauterine contraceptive device is a long acting reversible contraceptive, it is one of the most effective and safe method of contraception. Immediate postpartum IUCD service program approved by government of India in 2010. In most developing countries delivery time is the primary opportunity for women to access postpartum family planning method. PPIUCD it is of two types: IUCD 375 and IUCD 380-A. It is interfere with the ability of sperm to survive and to ascent the fallopian tubes where fertilization occurs and it alters sperm migration, ovum transport and fertilization. There are different timing of PPIUCD insertion such as Post placental insertion, Intra-Cesarean and within 48 hours after delivery. PPIUCD has no hormonal side-effects, but sometimes may lead to abnormal menstrual bleeding.

KEYWORDS

PPIUCD, Postpartum, Intra-Cesarean, Post placental

INTRODUCTION

Family planning (FP) is universally acknowledge as a life-saving and health improving intervention for women and children[1,2]. There is a chance for counseling women about using family planning methods because of the woman's regular interactions with the health system over a considerable amount of time[3].

The riskiest pregnancies for mother and child are those that occur within the first year after delivery; as a result, there is a higher chance that unfavorable outcomes will occur[4]. Despite the significance of contraception, only 36% of people use them regularly, and less than 1% of people have IUCD[5]. An IUCD (loop) is a small, "T-shaped" and made of flexible plastic with a thin copper wire coating contraceptive device inserted into a woman's uterus. And also post-partum IUCD is a contraceptive device inserted during the post-partum period (up to 48 hr after birth, ideally within 10 min of placenta delivery) [6].

The Postpartum period following child-birth during which the body tissues, especially the pelvic organs revert back approximately to the pre-pregnant state both anatomically and physiologically[7].

The government of India approved a programme for immediate postpartum IUCD services in 2010. One of the most reliable and secure methods of contraception is the intrauterine contraceptive device, which is a long-acting reversible contraceptive. In most developing countries delivery time is the primary opportunity for women to access post-partum family planning method, especially for those living in remote areas[8].

The clinical outcome of Cu-T375 PPIUCD using a novel dedicated inserter technique was studied in 2021, and the results demonstrate that there were fewer complications, such as pain and irregular bleeding, in the long inserter group as compared to the control group. Additionally, there were no cases of missing thread in the long inserter group[9].

Benefits

- Used right after delivery; long term protection
- 99% effective.
- Immediate return to fertility upon removal.

Types of Ppiucd [10]

1. IUCD 375:- Which is an inverted U-shaped device which provided protections for 5years.
2. IUCD 380-A: - Which is a T-shaped device which provided protection for 10 years.

Mode of Action [11]

The IUCD interferes with the ability of sperm to survive and to ascent the Fallopian tubes where fertilization occurs.

It alters sperm migration, ovum transport and fertilization. It stimulates a sterile foreign body reaction in endometrium potentiated by copper.

Side Effects

Copper bearing IUD's have no "hormonal side effects" but sometimes cause an increase in the amount, duration and painfulness of menstrual periods. These symptoms usually lessen or go away during the first few months after insertion.

Timing of Ppiucd Insertion [6]

Post Placental Insertion:-

Insertion of IUCD within 10 minutes after the placental expulsion following a vaginal delivery on the same delivery table.

Intra-Cesarean:-

Insertion that takes place during a cesarean delivery, after removal of placenta and before closure of the uterine incision.

Within 48 Hours After Delivery:-
Insertion of IUCD within 48 hours of delivery.

Importance of Proper Insertion Technique Of Ppiucd[12]
For the first 48 hours after birth:-
The length of the uterus is almost 30cm. This makes successful fundal placement of the IUCD with a typical interval. IUCD inserter tube is difficult, as the length of the tube is not sufficient. Instead, a long PPIUCD insertion forceps with a fenestrated end is used for insertion of the PPIUCD, to ensure the placement of fundus.

Problems At The Time of Insertion[11]
- Client discomfort or pain
- Displacement of the IUCD
- Cervical laceration
- Uterine perforation.

Problems Encountered After Immediate Ppiucd Insertion[11]
- Changes in menstrual bleeding pattern
- Cramping or pain
- Infection
- IUCD string problems
- Partial/complete IUCD expulsion

Postpartum Iucd Counseling [11]
1. Establish a supportive, trusting relationship.
2. Allows the client to talk and listens to her.
3. Engage patient husband or important family member with her consent.
4. Explore client's knowledge about the family planning and benefits of spacing pregnancies.
5. Ask patient about desired number of children, desired to space birth, desire for long term family planning.
6. Provides general information about benefits of spacing births.
- Advice that, it ensures her health and the health of her baby, she should wait atleast 2years after this birth before trying to get pregnant again.
7. Provide information about birth spacing methods.
- Based on client's prior knowledge and interest, briefly explains the benefits, limitations and use of following methods;- LAM, condoms, PPIUCD, POP's and post partum tubectomy.
8. Help and support the client to choose a method, by providing adequate information.
9. Discuss the key information about the PPIUCD with the client.
- Effectiveness.
- How does the PPIUCD prevent pregnancy
- How long does the PPIUCD prevent pregnancy
- The PPIUCD can be removed at any time by a trained professionals and fertility will return immediately.
10. Discuss about the advantages of PPIUCD.
11. Discuss about the limitations of PPIUCD.
12. Discuss the warning signs and explain that she should return to the clinic as soon as possible, if she experienced any of the warning signs.
13. Check the woman level of understanding.
14. If client cannot arrive at a conclusion on the visit, ask her to plan for a discussion with her family and follow up discussion on her next visit.

Timing Of Counselling For Ppiucd[11]
1. During antenatal visits.
2. During admission, early labor and prior to scheduled cesarean section.
3. On the first day of postpartum period or within 48 hours of delivery.

Post-insertion Counselling[11]
- Following insertion of PPIUCD, reinforce the key messages related to PPIUCD and inform the woman regarding follow-up visits.
- Points to be stressed are importance of breastfeeding and assurance that the IUCD does not affect breastfeeding.
- Follow up after 6 weeks for IUCD/Postnatal care.
- To come back any time if she has experiences any warning sign if the IUCD is expelled.

Warning Signs[12]
- Foul smelling vaginal discharge difference from the usual lochia.
- Lower abdominal pain, especially by not feeling well, fever or chills, especially the first 20 days after insertion.
- Concerns that IUCD has fallen out.

Ppiucd Misconceptions[13]
- PPIUCD perforates uterus and enters abdomen.
- PPIUCD expulsion is more common as compared to normal IUCD.
- PPIUCD causes cancer.
- PPIUCD alters breast milk composition.

Contraindications For Insertion Of Ppiucd[14]
- Chorioamnionitis
- Unresolved Postpartum hemorrhage
- Postpartum endometritis or Puerperal Sepsis
- More than 18 hours from rupture of membranes to delivery of the baby.
- Extensive genital trauma.

Ppiucd Service Delivery Guidelines[12]
- Both Cu-IUCD 380A and Cu-IUCD 375 are approved for PPIUCD insertion.
- Every woman must be counseled on the family planning options available for her in the post-partum period. If she chooses PPIUCD, then she should be counseled regarding advantages, limitations, effectiveness and side-effects related IUCD.
- The provider must explain the procedure for insertion and/or removal of the IUCD.
- The PPIUCD must be inserted only by a service provider who has been trained to competency in PPIUCD service provision according to national standards, as the technique of PPIUCD insertion is different from interval IUCD insertion.
- The provider must insert the IUCD using a PPIUCD insertion forceps and should take care to follow all recommended clinical and infection prevention measures for successful insertion.
- The provider must maintain records regarding PPIUCD insertions and follow up visits as per protocol.
- Woman must be followed by a provider oriented to PPIUCD service.

Advantages Of Ppiucd[11]
Advantages for the women
- Convenient method
- Immediate return to fertility on removal
- Safe and effective method
- High motivation for a reliable birth spacing method
- No risk of uterine perforation because of the thick wall of the uterus.
- Less chance of heavy bleeding, especially among Lactational amenorrhea method users, since they are experiencing amenorrhea.
- No effect on amount or quality of breast milk.

Advantages for the service provider or service delivery site:-
- Saves the time as performed on the same delivery table for post placental/intracesarean insertion.
- Need for minimal additional instruments, supplies and equipment.
- Convenience for clinical staff; helps relieve overcrowded outpatient facilities.

Limitations[11]
- Increased risk of spontaneous expulsion. The skilled clinicians with right technique of insertion are associated with lower expulsion rate.
- Perforation of the uterus, while placing a PPIUCD immediately after delivery of placenta or during cesarean section or during the first 48 hours postpartum is unlikely because of the thickness of the uterine wall in the postpartum period. No such cases are reported in the literature.
- Does not protect against STI's/HIV.

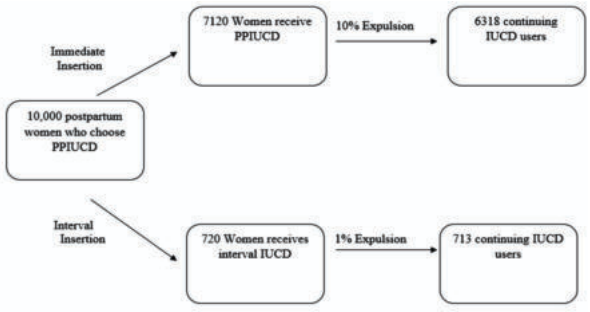
Standards[11]
The Following Standards Of Care Must Be Maintained
- Woman must be counseled regarding advantages, limitations, effectiveness, side effects and problems related to IUCD.
- The provider must explain the procedure for insertion and or removal of immediate PPIUCD.
- Woman must be screened for clinical situations as per WHO

medical Eligibility Criteria [MEC]. Screening should take place in the antenatal period, as well as immediately prior to insertion, immediately postpartum.

- The woman must be counseled and offered another suitable postpartum Family planning method, if her clinical situation does not allow for insertion of the immediate PPIUCD.
- The provider must insert the IUCD by following the recommended clinical and infection prevention measure for successful insertion.

Public Health Approach Ppiucd[15]

Weighing Convenience And Expulsion For Public Health Impact



CONCLUSION

PPIUCD is an effective, safe, reversible method of long term contraception with high reported expulsion and low perforation rate, compared to interval insertion. More research is needed in the field of PPIUCD to enhance awareness and acceptance in the community. Awareness and counseling the eligible couples during antenatal care can improve acceptance and compliance of PPIUCD continuation rates.

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Research Article

A COMPREHENSIVE REVIEW ARTICLE ON 5 F'S OF DISEASE TRANSMISSION AND ITS PREVENTION

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ABSTRACT

The 5 F's, that infectious diseases are transmitted from one person to another are through food, finger, fluid, fomite, and faeces. A major public health concern is that infectious diseases affect children more frequently. To increase awareness of health issues and alter behavior in a way that would promote good health and prevent illness, it is crucial to disseminate health information. Children who are still young and developing have little grasp of how contagious diseases spread and the health issues that affect them. A disease will result from an unhealthy lifestyle and activities among individuals. When a disease spreads from one person to another by direct or indirect contact, it is said to be communicable. Indirect contact means includes a range of mechanisms including the usual 5 F's: "finger, food, fomite, faeces, fluid." Direct contact nothing but infectious disease is frequently communicated through direct touch. The 5 F's roles in disease transmission: Food poisoning is caused by eating tainted food. Infections caused by infectious organisms found in faeces that enter the body through the mouth are known as faeco-oral infections. Hands frequently pick up bacteria through direct or indirect contact with contaminated surfaces. A fomite is an inanimate object that is used to transmit an infectious disease from one person to another. Prevention and control measures include, Spend no less than 20 seconds washing your hands with soap and water. Chapels cleaning their hands after using the restroom. Avoid sharing tooth brushes, razors, and use condoms while having sex. Many infectious diseases can be prevented using vaccines.

INTRODUCTION

5 F's of disease transmission

A robust and healthy country is built on its children. Over 1.2 billion children live on the planet, and 21% of Indians are children. Children who are still young and developing have little grasp of how contagious diseases spread and the health issues that affect them. A disease will result from an unhealthy lifestyle and activities among individuals. The pathogenic pathogens can spread through the 5F's—food, fluid, faeces, finger, and fingernail—and cause significant illness in people. By learning more about health issues and changing one's behavior, these can be avoided.

Disease

A disease is a specific aberrant state that adversely affects an organism's structure or function on the whole or in part, and which is not immediately brought on by any external trauma. It's common knowledge that diseases are medical illnesses with recognizable indications and symptoms. A disease can be brought on by either internal dysfunctions or external sources like infections. Internal immune system abnormalities, for instance, can result in a wide range of diseases, such as

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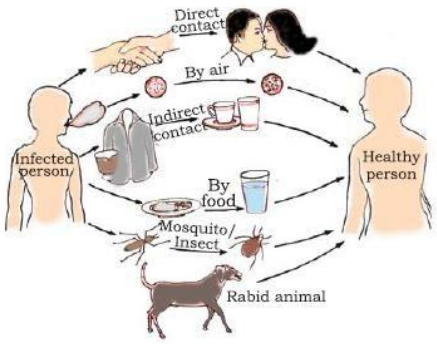
different types of immunodeficiency, hypersensitivity, allergies, and autoimmune disorders.

Disease Transmission

"Transmission of disease from person to person by direct or indirect contact" is what is meant by communicable disease. Direct interaction Person-to-person contact and droplet transmission are two common direct contact methods for the transmission of infectious diseases. Relative contact: The conventional "5 F's" — "finger, food, fomite, faeces, fluid" — are included in this broad category of mechanisms. Different forms of indirect transmission are possible: • Unclean hands and fingers; • Vehicle born; • Vector born; • Air born;



Role of 5 F's in disease transmission

Food

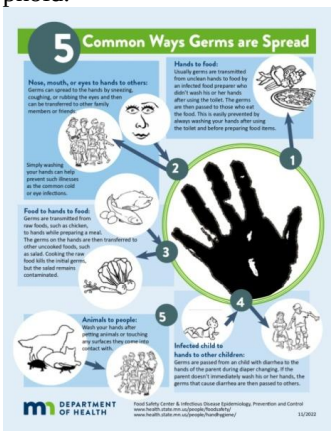
Any substance eaten to meet the body's nutritional demands. Food poisoning is caused by eating contaminated food, and it commonly leads to gastrointestinal illness. For instance, typhoid, gastroenteritis, and diarrhea.

Feces

When infectious organisms found in faeces enter the body through the mouth, it causes illnesses known as faeco-oral infections. Transmission may occur through contaminated food, water, hands, or targets. The following diseases are transmitted via faeces: cholera, polio, hepatitis, typhoid, diarrhea, and others.

Finger

Hands frequently pick up bacteria through direct contact with contaminated surfaces or indirect contact. It is possible to spread the infection to other body areas by rubbing one's eyes, nose, or mouth with contaminated hands. Examples include skin infections, lung infections, and gastrointestinal system infections like typhoid.



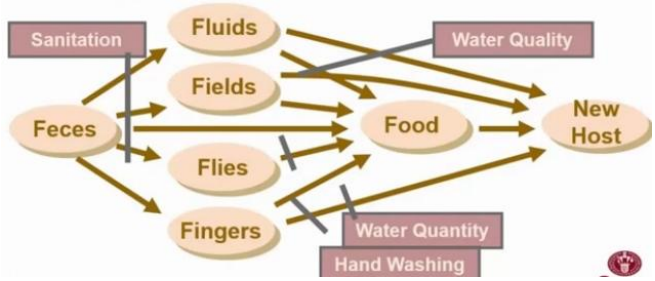
Fomite

A fomite is an inanimate object that is utilized to transmit an infectious disease from one person to another. Examples include beds, linens, towels, tissues, diapers, hairbrushes, forks, knives, and spoons, as well as restroom doors.
These inanimate objects are one of the most common sources of illness in people, especially children, since they carry germs that propagate infection.

Fluid

Body fluids are liquids that come from within a person's body and help with nutrient transportation and cell waste disposal.
Blood, saliva, semen, vaginal secretions, mucus, and urine are a few examples. HIV, Hepatitis B, and Hepatitis C are a few examples of diseases that can be spread by bodily fluids.

F- Diagram



Preventive measures

Prevention is always better than cure. Cooperation between school employees, the health department, doctors, and students is essential to halting and controlling the spread of disease.
Measures for prevention and control include:

Often Hand Washing

Spend no less than 20 seconds washing your hands with soap and water.

Cooking, visiting a sick person, and using the restroom all need washing your hands. After handling trash, stroking an animal, sneezing, coughing, or blowing your nose, wash your hands. Washing your hands is the most effective, cost-effective, and efficient technique to prevent cross-infection.

Hygiene of food

Pathogens can be found in food. Cleansing your hands, surfaces, and objects. Always put a lid on the cooked meal. Keep raw and cooked food separate to avoid food borne sickness. Always wash produce before eating it.

Feco-oral disease transmission prevention

Chapels cleaning their hands after using the restroom.

Prevention of disease transmission by fomite

Reduce exposure and sanitize any potential bugs by cleaning frequently. Wear personal protective equipment, such as gloves, masks, uniforms, and boots, as necessary.

Body fluids-related disease transmission prevention

Treat all bodily fluids, including blood, as contagious Avoid getting a tattoo, ensure that the needles are clean, avoid sharing tooth brushes or razors, and use condoms while having sex.

Different Protection

Many infectious diseases can be prevented using vaccines. For instance, the vaccine against salmonella typhi protects typhoid.
- Hepatitis B immunization to prevent exposure to the disease treating a worm infection with deworming for instance, albendazole (under supervision of health personnel)

General measures include

Using an O.R.S. for diarrhea, drinking carrot juice to get rid of worms, taking fluids and eating a liquid diet to treat typhoid, remaining at home while ill, having access to safe drinking water, and maintaining environmental cleanliness are all examples of preventative measures.

Ethical clearance

This article is a purely a narrative review article hence it is not required an ethical clearance.

Source of funding

Self (review article)

Conflict of Interest – Nil

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REVIEW AN ARTICLE ON EXAMINATION STRESS

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ABSTRACT:

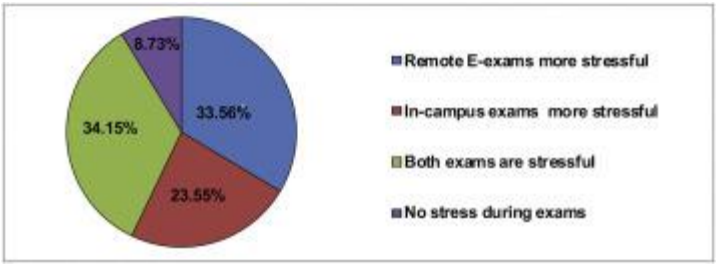
Adolescence is defined by the World Health Organization (WHO) as the age range of 10 to 19 years. It is believed that adolescence is a time of stress and strain. Due to their stage of development and unique issues, adolescents are a special population. Exams are a requirement for graduation from high school or college. In all calls received, the prevalence of exam anxiety increased from 27% in 2009 to approximately 40% in 2010. Stress related to exams is better avoided than managed. The greatest way for any adolescent to prevent exam anxiety is to make a systematic, persistent, structured, planned, and regular effort from the start of the academic session. Exam anxiety among college students has long been a source of discussion. Due to a variety of factors, including poor planning, their study habits, and a lack of necessary information, college students often suffer significant levels of stress. When stress is viewed negatively or is experienced in excess, it causes anxiety before and during exams, which ultimately has an impact on students' academic performance.

Keywords: Examination, adolescence, stress.

INTRODUCTION:

Exam stress is setting off mental health time bombs in students. While experiencing some stress is totally normal, excessive amounts will hinder performance. They must take exams for school, college, or competitive examinations, which puts a lot of stress and strain on them. Teenagers are increasingly seeking support for exam-related stress, according to data from the Family Doctor Association. The need for these services is rising, according to the British Association for Counseling and Psychotherapy. In all calls received, the prevalence of exam anxiety increased from 27% in 2009 to approximately 40% in 2010. A few significant risk factors for test stress include family pressure for the best performance, choosing exams for future development, emotional immaturity, the peer factor, bad self-image and negative ideas, and stimulants like tea, coffee, cola, etc. used prior to the exams. Suicidal attempts by students are more frequent either before exams or right after results are announced. The students may experience anxiety or depression as a result of the exam. In such circumstances, individuals could require therapy, antidepressants, or additional family assistance. Exam stress can cause you to feel anxious or depressed, and this might affect your sleeping or eating habits. so they can be there to support you, encourage you and offer a listening ear.[2]

PREVELNCE RATE:



This figure shows prevalence rate of examination stress.[3]

Signs of excess stress: An agitated and uneasy feeling could result from the body's release of numerous stress hormones in response to stressful conditions. The heart pounds and sweat production rises as muscles tense up, breathing quickens, and the mouth becomes dry. Early warning signs of severe stress include headache, difficulty falling or staying asleep, lack of appetite, short temper, feeling run down and ill, difficulty concentrating, and restlessness. Chest pains and high blood pressure. Indigestion or heartburn. Constipation or diarrhoea.[4] An exceptionally high level of stress can occasionally lead to panic attacks, depression, drug or alcohol misuse, food disorders, or even suicidal thoughts. Others may appear with a variety of general ailments, including a tension headache and writer's cramp. Exam anxiety is typically manifested in adolescent patients as restless nights, troubling thoughts, loss of appetite, rapid heartbeat, and shaky hands. The doctor needs to address these issues. If you frequently find yourself feeling frazzled and overwhelmed, it's time to take action to bring your nervous system back into balance. You can protect yourself—and improve how you think and feel—by learning how to recognize the signs and symptoms of chronic stress and taking steps to reduce its harmful effects.[5]

Management of examination stress

Practice Mindfulness with Relaxing Meditation Sessions.[6.]Stress related to exams is better avoided than managed. The greatest way for any adolescent to avoid exam anxiety is to make a systematic, persistent, structured, planned, and regular effort from the start of the academic session. The best defence against exam stress is confidence, which is made possible by timely exam preparation. Propranolol can help to some extent in easing exam stress symptoms. High levels of stress and anxiety could hurt their performance. Some people might also try suicide, however there isn't much solid proof supporting it. Once someone starts to feel stressed out before an exam, de-stressing techniques can also be used.[7] These strategies are self-help tactics that are simple to use and useful in the long run up until the exam.

These include the following:

Breathing techniques:

If your breathing becomes rapid and shallow, place your palm on your tummy to sense the pace of your breathing. Make yourself comfortable and sit down. If you only need to take a breath every few seconds or so, start breathing out slowly until you can finish the sequence in five seconds or less. You must practise until you are able to carry out this action automatically.8

Relaxation routine:

There are a variety of techniques used to improve relaxation. Controlled breathing, visualization, body scans, concentrating on a mantra (repeating of a word or phrase), and progressive muscle relaxation are techniques often used to enhance relaxation.[9] Take a deep breath and close your eyes. Try to identify any tight muscles and relax them. Even just 10 to 20 minutes a day of regular exercise can go a long way toward reducing stress. Exercise, riding, and walking all help to reduce stress.[10]

Complementary therapies:

Massages, yoga, and meditation all promote relaxation and stress reduction.[11]

Sleep:

Sleep hygiene needs to be upheld. Before going to bed, stimulants must be avoided. Most of the time, a relaxing bath can help you unwind and provide a peaceful night's sleep. The use of sleep aids must be avoided.

Group therapy: Decide on a study partner or form a study group. Through discussion, this group will help you and possibly help to clear up any doubts you may have. You can avoid exam anxiety by keeping your thoughts clear for a long time before you start the study process. The main goals of psycho educational group therapy are to teach Trusted Source members new coping mechanisms and information about their illnesses. [12]

Prevention of examination stress

For the Student:

Over the Course of the Academic Year A student must prepare for the exam in a methodical, planned, and organised manner. Time management skills are also essential for students because they must learn to combine their education and extracurricular activities. Another important factor in stress management is maintaining a healthy lifestyle. A well-balanced diet, regular outdoor exercise, and enough sleep are all necessary components for overcoming stress. Making friends with intelligent students will also be beneficial. Avoiding substance abuse can mean a lot. Mild stress has been demonstrated to improve exam performance, however greater stress may actually degrade it. At the Time of the Exam The student should refrain from reading late into the night, eating unhealthy foods, and engaging in debate about past papers. The best tip for preventing tension and worry would be to avoid attempting to study a new topic at the last minute. Drugs or brain boosters play no part in these circumstances. The wisest course of action in the exam room is to steer clear of conversations with acquaintances that could cause anxiety. It will be beneficial to arrive at the testing location on time and with a cheerful attitude. Before starting to answer, the student must feel at ease during the test and have read and understood the question paper. It is usually advisable to prepare to respond to the questions as fully and within the allotted time as possible. It is best to start with the queries that can be answered. You should set aside some time to go over the answer sheet again.[13]

Writing concise responses can prevent panic and save a lot of time. Discussions after a death are seldom encouraged. Parents' Concerns Ranking, class, grades, and other factors shouldn't be stressed by parents. They must be upbeat, comforting, and consistently stress success. They ought to support their youngster and recognise their efforts. Avoid negative conversations and comparisons. They must refrain from transferring their own nervousness to the test subject. Spending time with him or her will also be beneficial during a trying period. They must be amiable toward them and make an effort to foster a relationship that is warm, loving, and secure.

The child should not be required to study and should be given time to unwind in between lessons. They shouldn't set themselves up for failure or mistakenly overreact to failures. The child needs a conducive environment for learning. Additionally, it can be quite beneficial to keep family disputes from being brought up in front of the kids when they are being examined. Talking about several career opportunities with the youngster can assist him or her get ready to choose from the options accessible in life. At key times in their lives, they should be given the utmost importance, and a scenario where the youngster can feel abandoned and slide into sadness shouldn't ever be created.[14]

Conclusion

Finally, it should be mentioned that although some kids manage any circumstance with composure, others become frightened at the slightest challenge. Therefore, it is imperative that parents constantly support and occupy their kids with extracurricular activities like music, dancing, sports, etc. that also serve as stress relievers. The government and NGOs should turn their attention to this issue in addition to others so that the epidemic might be stopped in its tracks before it flares up in the ensuing decades.

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Cotard's Delusion-DEAD MAN'S SKETCH

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Abstract

Cotard'sdelusion (CD) is anerratic psychiatric disorder in which the patient believes to be dead, *i.e.*, the patient holds nihilistic delusions concerning his/her own existence. Taking into justification its rarity, and possible subdiagnosis due to inexperience, most of the literature consists of case studies, confounding a more systematic approach and leading to hitches in deciding the best clinical direction to offer the patient misery from CD. The patient eventuallygrieves from nihilistic delusions that they no lengthier exist. Though the delusional disorder was first recognized in the 17th century by Dr. Jules. It is neither classified under DSM-IV-TR nor ICD-10. There is main **three main stages** of this disease condition: **Germination stage**, **Blooming stage and Chronic stage.** Detecting Cotard delusion is habitually difficult because most organizations don't distinguish it as a disease. Patients habitually receive medication and therapy. Medications used to treat this delusional disorder include: Anti-anxiety, Antidepressants, Antipsychotics, Mood stabilizers medications, Psychotherapy, Play therapy etc. treatment modalitiesNevertheless,Cotard syndrome have been described in connotation with many other affective disorders, it is less often found in patients with catatonia.

KEYWORDS: Capgras delusion, Melancholia, Migraine, Dissociative disorder, Catatonia, Dementia,Multiple sclerosis

Introduction

Cotard's syndrome is a comparatively rare illness that was first described by Dr. Jules Cotard in the year of 1882.This rare case of Delusional disorder hasbeen reported in patients with psychotic disorders, mood disorders and medical conditions. Most cases of Cotard'sdelusion are more approachable to ECT than to pharmacological treatment. We present the case of a recent immigrant with Cotard's syndrome, in the framework of depression, to illustrate both how weakening the condition can be and how a course of effective, personalized therapy can improve outcome.[1]

Cotard's syndrome is anerratic neuropsychiatric condition categorized by anxious melancholia, delusions of non-existence concerning one's own body to the level of delusions of immortality. It has been most usually seen in patients with spartan depression. However, now it is thought to be less common possibly due to early institution of treatment in patients with severe depression with psychotic symptoms.[2,3]

Cotard delusion is a rare condition marked by the false belief that makes the patient realizes that his or her body parts are dead, dying, or don't exist. It usually occurs with severe depression and some

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other psychotic disorders. It can go together with other mental illnesses and neurological conditions. The patient might also hear it referred to as walking corpse syndrome, Cotard's syndrome, or nihilistic delusion.[4]

Methodology

We have performed a PubMed and Google Scholar quest in March,2022 by using the phrases "Cotard's Delusion","Cotard's delusional pathophysiology", "Delusional treatment", "Walking Corpse Syndrome" and "Delusions of negation".The search borne almost 130 papers, including reviews, case reports, case series, and small clinical studies. After excluding the 40 non-English reports without an English intangible content, we involved the remaining 90, regardless of publication date.

History

Cotard's syndrome was originally labelled in **1880** by the **French psychiatrist Jules Cotard**, who entitled it the délire des négations.The distinctive symptom of the syndrome is nihilistic delusion. Stereotypically, in this delusional disorder the patients believe they have lost organs, blood or body parts, or even that they are dead.This relatively occasionalsyndrome exists in patients with depression, schizophrenia and psychotic disorder triggered by a general medical condition, and it is often allied with dementia.

Delusions are the principal manifestation of a psychosis in neurologic disorders. Cotard's syndrome and other content-specific delusions may be observed in neurologic illnesses, organic lesions of the brain and distressing brain injury. In patients suffering fromCotard's syndrome, brain atrophy has been reported to occur more recurrently when equated with controls.[4]

Background

People with Cotard's syndrome believe that parts of their body are missing, or that they are dying, dead, or don't exist. They may think nothing exists.Cotard's syndrome is rare, with about **200 known cases worldwide**. People with this syndrome often become much less social. Sometimes, they may stop speaking at all. Some hear voices that tell them they're dead or dying.The CD is one of a variety of narrowly defined monothematic delusions characterized by nihilistic beliefs about the body's existence or life itself. The presence of CD within the context of schizophrenia is rare (<1%), and remains understudied.[5]

Anothewr Name - Cotard delusion, Walking Corpse Syndrome,Delusions of negation

Risk Factors

Researchers aren't definite what causes Cotard delusion, but there are a few conceivable risk factors. Quite a lot of studies indicate that the middling age of people with Cotard delusion is approximately 50. It can also transpire in children and teenagers. People under the age of 25 with Cotard's delusion incline to also have bipolar depression. Women are more probable to this special type of delusional disorderas well as Capgras syndrome can also be presenttogether. Other mental health conditions that might upsurge someone's risk of evolvingCotard delusion include:

- postpartum depression
- depersonalization disorder
- dissociative disorder
- catatonia
- bipolar disorder
- psychotic depression
- schizophrenia

This special type of delusion can also look to be associated with certain neurological conditionstogether with:

- stroke
- brain tumours
- brain infections
- multiple sclerosis
- Parkinson's disease
- dementia
- epilepsy
- migraines
- traumatic brain injuries[6]

Common Causes

The precise cause of Cotard'sdelusion is idiopathic. There are certain conditions that more probably cause this syndrome:

- MS (serious incapacitating disease of the brain and spinal cord)
- Parkinson's disease (nerve cell impairment in the brain leading to shaking, stiffness and pace difficulty)
- Dementia (forfeiture of memory power and judgment)
- Encephalopathy (a condition, where a virus or toxin disturbs the brain)
- Stroke
- Subdural bleeding (bleeding external area of the brain)
- Epilepsy
- Migraine[7]

Pathophysiology

The fundamental neurophysiology and psychopathology of Cotard'sdelusion might be associated to the problems of delusional misidentification. Neurologically, Cotard's delusion (negation of the self or personality) is thought to be related to Capgras delusion (people exchanged by impostors); each category of delusion is thought to result from neural miscarrying in the fusiform face area of the brain, which recognizes faces, and in the amygdalae, which subordinate emotions to a recognized face.

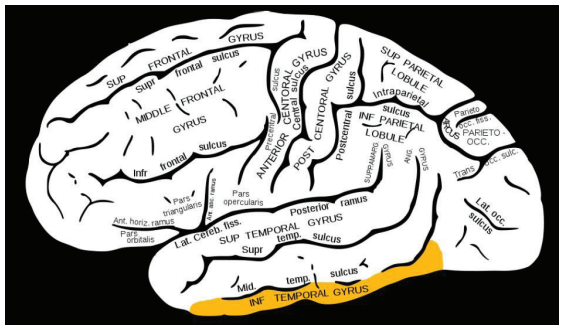
The neural discontinuation creates in the patient a sense that the face they are perceiving is not the face of the person to whom it belongs; therefore, that face absences the familiarity (recognition) normally allied with it. This results in derealization or a disconnection from the environment. If the pragmatic face is that of a person known to the patient, they experience that face as the face of an impostor (Capgras delusion). If the patient sees their particular face, they might perceive no connotation between the face and their own sense of self—which results in the patient believing that they do not exist (Cotard's syndrome). Cotard's syndrome is usually come across in people with psychosis, as in schizophrenia. Haemodialysisfixed the patient's delusions (of negating the self) within hours of treatment, which suggests that the occurrence of Cotard's delusion symptoms might not always be source for psychiatric hospitalization of the patient.[8,9]

Stages

Cotard's syndrome occurs in **three main stages**:

1. **Germination stage**: indications of psychotic depression and of hypochondria appear;
2. **Blooming stage:** full progress of the syndrome and delusions of negation;
3. **Chronic stage**: sustained severe delusions along with lingering psychiatric depression.[10]

Cotard's syndrome removes the person with the state from other people due to neglect of their personal hygiene as well as physical health. Delusions of negation of self-prevent the patient



from making sense of external certainty, which then produces aninaccurate view of the external world. Such delusions of repudiation are usually found in schizophrenia. Even though a verdict of Cotard's syndrome does not necessitate the patient to have had hallucinations, the strong delusions of negation are analogous to those found in schizophrenic patients.[11,12]

Symptoms

Clinical featuresof Cotard's delusion) include:

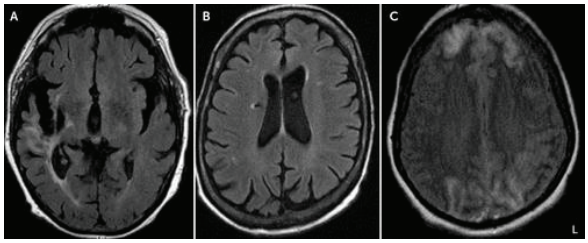
- Delusions one is dying, dead, or no extensive exists
- Spartan depression or sadness (melancholia)
- Attempts to self-harm
- Taking away from social activities
- Patients stop speaking
- Insensitivity to pain
- Refusal to eat leads to nutritional deficiencies
- Delusional voices say the patient is dead or dying

- Ideas of damnation or refusal
- Delusions of immortality[13]

Diagnostic Evaluation

DetectingCotard delusion is habitually difficult because most organizations don't distinguish it as a disease. This indicates there is no uniform list of criteria used to make a diagnosis. In most cases, it's only detected after other possible conditions have been ruled out.'Walking Corpse Syndrome' is spotted based on the patient's clinical history as well as symptoms. Tests are used to eliminate other conditions as well as to diagnose associated diseases. These tests include:

- Blood test
- EEG
- CT Scan
- MRI
- SPECT 14



Scanning reports shows the activeness of brain

Treatment

The principal way to treat walking corpse syndrome is to treat the fundamental medical condition that causes it. Patients habitually receive medication and therapy.Medications used to treat this delusional disorder include:

- Anti-anxiety medications
- Antidepressants medications
- Antipsychotics medications
- Mood stabilizers medications
- Psychotherapy
- Behavioural therapy
- CBT

ECT may be used as a last resort when medications and talk therapy do not work

Complications

Feeling like the patient already died can lead to several complications. For example, some people **stop bathing or taking care of themselves**, which can reason those around them to start estrangement themselves. This can then lead to further feelings of depression and isolation. In some cases, it can also lead to skin as well as teeth problems to the patient. In case of some patients, they stop eating and drinking as they have faith in their body doesn't need it. In unembellished cases, this can lead to **malnutrition and starvation**. **Suicide attempts** are also common in people with Cotardsyndrome. Some see it as a way to prove they're even now dead by showing they can't die again. Others feel like stuck in a body and life that doesn't look real. They hope that their life will get improved or stop if they **die again**.

Existing With Cotard Delusion

- Cotard delusion is anerratic but somber mental illness. While it can be hard to get the right diagnosis and treatment, it generally responds well to a mix of therapy and medication. Many people prerequisite to try several medications, or a combination of them, before they find something that works. If nonentity seems to work, ECT is often an active treatment. If one think that they have Cotard delusion, should try to find a doctor who seems open to listening to the symptoms and working with the patient to detect or address any other conditions you might have.

Reported Cases

Report No. 1 - Ms. L, a 53-year-old Filipino woman, was admitted to the psychiatric unit when her family called 911 because the patient was peevish that she was dead, smelled like decomposing flesh, and wanted to be taken to a mortuary so that she could be with dead people. Upon discussion in the hospital, the patient voiced fear that "paramedics" were annoying to burn down the house where she was staying with her cousin and her brother. She also admitted to hopelessness, low energy, decreased appetite, and drowsiness.Ms. L reported that she had been under treatment of antidepressants while in the Philippines but could not recall the name or dosage of the medication.After organic reasons were ruled

out, treatment with quetiapine and bupropione SR was started. At the time of discharge, she deprived of nihilistic or paranoid delusions and hallucinations and articulated hopefulness about her future and a craving to participate in psychiatric follow-up care.[15]

Report No. 2-'Mr. C' is a 58-year-old Navy veteran with a history of substance use disorder in sustained diminution, TBI, mild neurocognitive impairment, and a 15-year diagnosis of schizophrenia. Prominently, his sister designated that Mr. C agonized his first psychiatric break during adolescence. He was prescribed medication, but his parents, who directed their preference for treating his condition with prayer, declined these. He has been living with his sister for the past 20 years and partakes in all activities of daily living. He is a widower and is currently out of a job. His TBI history includes a single episode nearly 25 years ago when he fell off a moving train, necessitating extended hospitalization. Mr. C was carried in to our Veterans Affairs (VA) hospital by his sister after vocationof the Veterans' Crisis Line with SI. One week past there was an exchange with his brother-in-law resulting in Mr. C assaultive him with a crowbar and the sister superseding. On admission, the family reported that Mr. C was taking venlafaxine and quetiapine.[16]

Report No. 3- A 50-year-old male patient, native of Cajamarca, who had finished high school and lived with his son and daughter-in-law for three months. His family psychiatric background included a mother with BPAD, a father who was a heavy drinker, and two sisters with depression diagnoses. None of them had obtainableCotard's features in the course of their syndromes.Since the age of 13 the patient has presented behavioral changes, with marked isolation due to fearing other people and poor school performance so he recurrent third year of high school. The patient completed his studies with problems and had no interest in continuing, so he decided to work on his parent's farm. His relatives labelled him as "strange," "weird," of "repressed character," quiet, very dependent on his parents and as someone who took no initiative, ran no projects, did not bathe, and had no interest in personal hygiene. This behaviorkeeps on and for periods got shoddier.He was treated with olanzapine 10 mg/day and clonazepam 2 mg/day; with this therapy, he showed some development, was no longer anxious, and could go off home alone.During physical examination flaking lesions on the scalp were found, comprehensive rigidity, and short step gait. The rest of the bodily examination did not reveal any pathological findings. During mental inspection, the patient was found in a pharaonic position, with narrow consciousness, confusion, paralysis of self, derealization, and depersonalization. There were also symptoms like flat affection, paranoid mood, ambivalence, and feelings of guilt. Lastly, the patient exhibited decreased vital energy, insomnia, hypokinesia, and waxy flexibility, sustaining persistent positions as well as lack of spontaneity. On CT scan no alterations were found.It was decided to start dealing with aripiprazole 30 mg/day and clonazepam 2 mg/day. The patient was meaningfullyamended after two weeks of treatment. Delusions were lessened and emotional resonance upgraded.[17]

Report No. 4-A 45-year-old male patient was self-confessed to SVRR Government General Hospital, Tirupati by his family when he happeningdemanding that he had died and his gut was rotting. He seemed withdrawn and anxious. He spoke irrelevantly and proceeded to self-starvation. He protested about his organs and brain dysfunction and had faecal and urinary incontinency. He had been treated by psychiatrists 3 years back for severe depression and was on antidepressants. There was nothing significant family history of mental illness. Physical examination displayed mild pallor and dehydration with bilateral pitted edemashadowed by the mental examination, where the patient obtainable with sad effect, mutism and negativism, he also displayed rigidity in all 4 limbs. Blood analysis exposed that he was anemic (hb-10mg/dl) and had hypoproteinemia and hypoalbuminemia from malnourishment due to starvation. On monotonous lab investigations, no further anomalies were seen. The patient was given a test dose of IV Lorazepam (2mg/dl), there was no enhancement. Physicians, then continued to start the patient on ECT. The patient's care takers were uncertain towards the treatment at first, but upon further counselling and advocation by the health care officials, they agreed to go with the treatment and ECT was begun. He was ongoing on bilateral ECTexploitingThiopentane for induction and Succinylcholine as muscle relaxant. Abetment of delusional indicators were seen only after 8 ECT cycle.[18]

Report No. 5 - Mr. A.S, 43 years old, with a long-termhistory of psychiatric hospitalizations in his home country has presented himself at animmigrant

camp in Greece and sought psychological and psychiatric assistance for his condition. The patient described nihilistic delusions such as believing he did not have blood running through his veins and that he was immortal or that it was unbearable for him to die. Most tenacious symptoms included severe anxiety and continuing depression while he also stated various auditory hallucinations. The patient's history recommended that he was hospitalized 3 times in his home country in various psychiatric clinics and for substantial amounts of time. The first psychiatric hospitalization befell when the patient was 37 years old for about six months, mostly due to severe depression.Upon preliminary psychological assessment at the refugee camp the patient was denoted for psychiatric assessment and was subsequently detected with psychosis (ICD-10, F29), while the appearing psychiatrist testified suspecting Cotard's syndrome. During the first month of CBT sessions, self-help techniques such as deep breathing exercises and relaxations methods were introduced. Primarily, only minor enhancement of anxiety and depressive symptoms was reported by the patient and by week 6 further enhancement of depressive symptoms was testified.While nihilistic delusions somewhat improved with psychiatric medication, these persisted active until the end of the psychological intrusions and the subsequent transfer of the patient to a specialized mental health facility in Greece.[19]

Conclusion

Cotard's delusion is a very occasional as well as exceptional category of mental disorder but can be detected and scared by watching numerous social media videotapes in various multimedia platforms like Facebook and other sites. So, we, authors have taxed our best to cover the allied information regarding this seldom known disorder. We expect that the readers will get enough evidence about Walking Corpse Syndrome or Delusions of negation.

List Of Abbreviations

- CD-Cotard delusion
- ECT- Electroconvulsive Therapy
- MS-Multiple sclerosis
- CT-Computed tomography
- MRI-Magnetic Resonance Imaging
- SPECT -Single-photon emission computed tomography
- EEG- Electroencephalogram
- CBT-Cognitive BehavioralTherapy
- TBI-Traumatic brain injury
- Bipolar affective disorder

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Myths & Facts Regarding Diet in Pregnancy-A Survey Review

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ABSTRACT

At the current scenario due to more and more civilization pregnancy diet related myths are self-explanatory as well as confusing due to misleading by the social media. Especially in the rural areas of India including the underdeveloped and developing countries this problem is a social drawback in this 21st century.Pregnancy can be equally an incredibly exciting and nerve-racking time. And as the logistical authenticity of pregnancy sets in, women who are expecting often swiftly come to understand all the ways they may not be able to eat exactly as they did before—principally when it comes to the safety of many foods and beverages as well as their timings and frequency. This article offers a comprehensive review of Myths & Facts Regarding Diet in Pregnancy including the factual explanation. The survey conducted from 1st September to 15 October.

Keywords: Myths, Dairy products, Maternal nutrition, Obstetricians, Gynaecology, Human chorionic gonadotropin, oestrogen

INTRODUCTION

There are manifold myths around what foods to eat and evade during pregnancy. Henceforth, we spoke to a nutritionist about the precise pregnancy diet. Pregnancy is a very distinct phase in a woman's life, a beautiful journey. As exciting as it is, it likewise brings with it anxiety and nervousness. We know that people around us have unlimited advice so it becomes tough with integrating and digesting information and putting it to good use. To gain significant insights into the importance of nutritious food for hopeful mothers and to bust some myths around the foods they can eat or avoid, we spoke to Dr. Rajeshwari, a Nutrition expert with Adichunchanagiri Institute of Medical Sciences & Research Centre.

Significance of maternal nutrition

Dr. Rajeshwari conveyed to us that nutrition ensues to be a key factor in ensuring the good health of both the mother and the child. She said, "Pregnancy revenues a toll on the body and therefore, good nutrition is compulsory due to augmented maternal metabolism and to offerfoetal nutrition."

Busting myths around food for pregnant women

We, however, cannot contradict that there are multiple myths about what mothers should and should not eat. This can generate confusion and lead to nervousness in expectant mothers. Hence, it is imperative to combat misinformation and myths.

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Dr. Rajeshwari busted numerous myths about food for pregnant women. Pregnancy can be both an amazingly exciting and nerve-racking time.In this article, we rounded up and demystify some of the most common myths neighboring nutrition and food safety during pregnancy so that the gravid mothers can feel more self-assured about her food choices and eating patterns over the next 9 months.

METHODOLOGY

This detailed review includes open data about Myths & Facts Regarding Diet in Pregnancy. This information collected from the different search engines like 'Cinahl', 'Google Scholar', 'Cochrane' etc. from plentiful review as well as research articles along with a number of renowned articles. The search borne almost 60 papers, including reviews, case reports, case series, and small clinical studies. After excluding the 20 non-English reports without an English abstract, we encompassed the remaining 40, notwithstanding of publication date.

MYTHS VS FACTS

MYTH 1: Eating peanuts and dairy products can make the baby ALLERGIC

TRUTH: It's perfectly safe to eat these foods unless the mother herself is allergic to them, or if the doctor advises the pregnant mother not to. There is no proof that cutting out some foods will prevent the baby from being allergic to them, but limitation in diet can be harmful to the baby as the mother might not get all the nutrition needed.

There are some nutriments that it's best to circumvent during pregnancy due to the risks in certain harmful microbes. They comprise some soft cheeses, patés, raw meat or fish, uncooked or partially cooked eggs, and soft-serve ice cream.

MYTH 2: The mother should eat DOUBLE during pregnancy

TRUTH: There is no proof or evidence to show that the motherneeds to eat for 2 when during pregnancy. How much extra the motherneeds to eat depends on her weight and height, how active the mother is anddepends on the months of pregnancy. But, in over-all, most women must only eat about 350 to 450 additional calories each day while they are pregnant. That's a twosome of extra healthy nibbles like fruit, a hard-boiled egg or a berry smoothie.

MYTH 3: Cream can assist toevadeSTRETCH MARKS

TRUTH: There is no proof that creams or oils can remove or prevent stretch marks, which often weaken in time.[1]

MYTH 4: Give up the SPICES

Myth also proposes that spicy foods eaten during pregnancy can burn the baby's eyes, consequential in blindness. Spicy diets also have been answerable for miscarriages and the induction of labour. While those connotations might sound plausible to some people, they aren't real. Spicy foods can upsurge a pregnant woman's risk of heartburn, though. Recurrent heartburn during pregnancy may mean that the baby will be born with a head full of hair, if we are to believe another old wives' tale.[2]

TRUTH: There no relevance in between the use of spices (within limit) and pregnancy complications.

MYTH 5: Pregnant People should avoidSWEETS.

TRUTH: Pregnant people should be aware of what they eat; however, ostracism an entire food group isn't essential—unless the doctor says so. What's more, some sweets provide health benefits, i.e., eating chocolate every day can be good for the pregnant mother. According to an August 2010 study, consumption the sugary substance can decrease the risk for preeclampsia and gestational hypertension.

MYTH 6: Say goodbye to SEAFOOD.

Eating fish high in omega-3 fatty acids and low in mercury throughout pregnancy may

produce cleverer kids. Children whose parents ate at least twelve ounces of seafood a week during pregnancy had higher verbal IQ, better social and communication skills, and superior motor skills, according as per an October 2019 study. Another study proves that the children also had a better metabolic profile, thanks—in large part—to seafood.

TRUTH: There is no direct connection in between seafoods and pregnancy until contraindication confirmed by the physician.

MYTH 7:The pregnant mother shouldn't have CAFFEINE.

In the past, pregnant people were counselled to avoid caffeine—in soda, coffee, tea, and chocolate.

TRUTH: Current studies show that modest amounts are safe. Conferring to the ACOG, pregnant people can safely devour up to 200 milligrams of caffeine a day, or one 12-ounce cup of coffee.

MYTH 8: Eating PEPPERONI PIZZA During Pregnancy Can Maltreatment the Foetus.

According to the American Pregnancy Association, deli and luncheon meats should be dodged during pregnancy. This is due to conceivable contamination and their high nitrate concentration.

TRUTH:However, these foods can be consumed—in moderation—if they are properly prepared, i.e., deli meats can be eaten if they are heated to 165 degrees F or higher. This means pepperoni pizza, for example, is a safe bet.[3]

MYTH 9: It's Okay to Have an Occasional GLASS OF WINE

The pregnant mother should never drink any alcohol while pregnant. There is no safe quantity or type of alcohol during pregnancy, and even moderate consumption can lead to lifelong problems for theoffspring. These problems can be less noticeable than those caused by heavy drinking and can comprise coordination, attention, and learning issues.

TRUTH:Alcohol-related congenital disabilities are entirely preventable. The OB-GYN can offer instruction on avoiding alcohol while pregnant.[4]

MYTH 10: Pregnant women should avoid CHOCOLATE

Although chocolate does contain caffeine in small volumes, as with coffee and other caffeinated beverages, it's faultlessly fine in moderation.

TRUTH: Chocolate is not contraindicated during pregnancy if the physician confirms about any allergies.

MYTH 11: It's not safe to eat FISH while pregnant

TRUTH: Fish contains more nutrients and proteins. So, fish is very healthy food during pregnancy. But if any women is having allergy about any particular species of fish then that should be avoided.[5]

MYTH 12: The pregnant women need more CALORIES during all stages of pregnancy.

TRUTH: For the first trimester, the mother can eat about the same amount as she did before she was pregnant. Formerly, in the second trimester, the mother calorie needs will surge by about 340 calories per day—about the quantity in two tablespoons of hummus, one pita bread and raw veggies or about 5 ounces of yogurt, one fourth cup granola and 1 cup berries. In the third trimester, the mother should aim for about 500 extra calories per day. Note that these calorie needs may differ depending on the women's pre-pregnancy weight, activity level and if she is carrying multiples, and it's best to speak with her healthcare provider about your specific needs. If counting calories makes the head spin, try focusing on tuning into her hunger and fullness cues. The pregnant woman's body is smart, and it's especially helpful to listen to its signals as sheundergoes the many physical changes of pregnancy.

MYTH 13: CHEESE is off-limits.

TRUTH:Most cheeses items,particularly hard and pasteurized cheeses like Cheddar, Parmesan and Romano are safe to eat during pregnancy. Nevertheless, the pregnant woman should evade unpasteurized cheeses (as well as unpasteurized milk and other dairy foodstuffs) and soft full-grown cheeses, including brie, gorgonzola, and camembert. Unpasteurized cheeses along with soft ripened cheeses (as well as delicatessen meats and undercooked poultry) have a complex risk of containing potentially harmful bacteria that could lead to listeriosis, and because pregnant women have a higher risk of foodborne illnesses, they should take safeguards with cheeses that are more prone to bacterial growth.

MYTH 14: MORNING SICKNESS only happens in the morning.

Morning sickness is theoretically a misnomer, because the nausea and vomiting that characterize it can occur at any time during the day (even though it does tend to be more Spartan in the morning for many women). While the cause of nausea and vomiting in pregnancy is not entirely understood, it's thought to be related to low blood sugar and/or the rise in pregnancy hormones, including HCG or oestrogen. If the pregnant mother find herself struggling to eat due to nausea, here are a few strategies she can try:

- Plan for five to six slighter meals throughout the day, in its place of three larger ones
- Line up protein in the meals and snacks
- Should take prenatal vitamins with a snack
- Make tea with ginger or lemon
- Get sufficiently rest
- Drink profusely of fluids throughout the day
- Eat a few crackers as soon as wake up to curb the hunger may feel first thing in the morning
- Take a walk in the fresh air[6]

CONCLUSION

Though the concept clearance regarding this topic is tough to handle but still we tried to keep the real facts against the wrong concepts of the society simultaneously we tried to cover the related information regarding thefacts behind the formation of those myths. We hope that the readers have received all the information and mythical concept clearance regarding diet pattern during pregnancy.

LIST OF ABBREVIATIONS

- ACOG-American College of Obstetricians and Gynaecologists
- HCG-Human chorionic gonadotropin

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Pedophilia-Social Shame at present

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Abstract

Presently in the society main pathetic and cruel news is sexual harassment as well as molestation towards children, girls, women even old age people also. By keeping this concept to make people aware have taken this initiation to put light on a very interesting topic i.e. Pedophilia. Pedophilia is a type of illness in conventional usage, a psychosexual disorder, commonly affecting adults, manifested by sexual interest in preteen children or attempts to engage in sexual acts with prepubescent children. The word pedophilia originates from the Greek παῖς, παιδός (paîs, paidós) means "child", and φιλία (philía), "friendly love" or "friendship". The term paedophilia erotica was thought up in an 1886 article by the Viennese psychiatrist Richard von Krafft-Ebing. According to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition text revised the fantasies, sexual urges or behaviors must cause clinically significant distress or impairment in social, occupational or other important areas of daily functioning. Some psychological treatment ways for treating this disease are Cognitive-behavioral Therapy (CBT), Psychodynamic Therapy, Neurobiological Interventions etc.

Keywords: Preadolescent, Child pornography, DSM-5, Cognitive-Behavioral Therapy, POCSO

Introduction

Pedophilia is defined as a sexual attention towards preadolescent progenies. It is empirically connected with sexual offending contrary to children. Child pornography criminals and sex crooks with child victims are more likely to be paedophiles based on self-report or unbiassed measures of sexual safeties. At the same time, some paedophiles have not had any known sexual commerce with children, and perhaps half of sex offenders against children would not meet investigative criteria for pedophilia.[1]

Pedophilia (otherwise spelt as paedophilia) is a psychiatric condition in which an adult or older juvenile experiences a prime or exclusive sexual desirability to prepubescent children. Even though girls typically begin the process of puberty at age of 10 or 11 where in case of boys at age 11 or 12 criteria for pedophilia extend the cut-off point for prepubescence to age 13. A person must be at least 16 years old, and at least five years older than the prepubescent child, for the lure to be diagnosed as pedophilia.[2,3]

As per another concept Pedophilia is a type of illness in conventional usage, a psychosexual disorder, commonly affecting adults, manifested by sexual interest in preteen children or attempts to engage in sexual acts with prepubescent children. The term was used with that connotation in the psychiatric diagnostic literature prior to the publication of the fifth edition of the DSM-5(2013), which replaced

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pedophilia with pedophilic disorder. As in earlier editions, the DSM-5 categorizes the disorder as one of several paraphilic disorders, concerning atypical sexual interests, practices, or behaviours (paraphilias).[4]

Methodology

This detailed review includes open data about Pedophilia global information in all the aspects. Though the topic Pedophilia is a enormous area to discuss, still we tried best to open up the associated data reading this in various perspectives. This information collected from the different search engines like 'Cinahl', 'Google Scholar', 'Cochrane' etc. from abundant review & research articles along with a number of well-known articles. The search borne almost 70 papers, including reviews, case reports, case series, and small clinical studies. After excluding the 25 non-English reports without an English abstract, we encompassed the remaining 45, irrespective of publication date.

Etymology

The word pedophilia originates from the Greek παῖς, παιδός (paîs, paidós) means "child", and φιλία (philía), "friendly love" or "friendship". Pedophilia is sometimes referred to as nepiophilia (from the Greek: νήπιος (népios) meaning "infant" or "child," which in turn derives from "ne-" and "epos" meaning "not speaking"), though this term is rarely used in theoretical sources.[5]

Epidemiology

CSA is a solemn problem of substantial magnitude throughout the world. A recent systematic assessment of 55 studies from 24 countries found much assortment in studies in terms of definition and measurement of CSA and clinched that rate of CSA ranged from 8 to 31% for women and from 3 to 17% for men. Despite alike methodological challenges, other methodical reviews which included studies showed worldwide across hundreds of different age-cohort samples have observed alarming rates of CSA, with averages of 18–20% for females and of 8–10% for males, with the lowest rates for both girls (11.3%) and boys (4.1%) found in Asia, and highest rates found for girls in Australia (21.5%) and for boys in Africa (19.3%).[13]

Children, under the age of 18, underwrite to 37% of India's population with large proportions experiencing great denials such as lack of access to basic education, nutrition or health care. A large-scale national study showed in the year 2007 by MoWCD , to assess the extent and nature of child abuse in India, uncovered some alarming statistics; that among the 12,447 children interviewed, more than half (53 %) reported experience of sexual abuse, defined as "sexual assault, making the child fondle private parts, making the child exhibit private body parts and being photographed in the nude" and over 20 percent reported severe sexual abuse.[14]

History of Pedophilia

Pedophilia was first officially documented and named in the late 19th century. A noteworthy amount of research in the area has taken place since the year 1980s. Even though habitually recognized in men, there are also women who exhibit the syndrome and researchers taken up obtainable estimates underrepresent the true number of female pedophiles. No cure for pedophilia has been developed, but there are therapies that can reduce the incidence of a person obligating child sexual abuse. The exact causes of pedophilia have not been convincingly recognized. Some studies of pedophilia in child sex offenders have allied it with various neurological abnormalities and psychological pathologies.[6] The term paedophilia erotica was devised in an 1886 article by the Viennese psychiatrist Richard von Krafft-Ebing but does not go in the author's Psychopathia Sexualis until the 10th German edition. A number of authors prophesied Krafft-Ebing's diagnostic gesture. In Psychopathia Sexualis, the term seems in a section titled "Violation of Individuals Under the Age of Fourteen", which emphases on the forensic psychiatry aspect of child sexual crooks in general. Krafft-Ebing labels numerous typologies of offender, separating them

into psychopathological and non-psychopathological ancestries, and hypothesizes several seeming causal factors that may lead to the sexual abuse of children.

Causes

Numerous factors could play a role in the progress of paedophilic condition such as:

- genetics and epigenetics
- hormones
- developmental differences
- differences in brain structure
- childhood experiences

Since many studies involve only people who have acted out pedophilic behaviour and are in the legal organization as a result, research on those with pedophilia who don't act on their thoughts is still imperfect.5 factors linked to pedophilia include:

- Pathological or dysfunctional family systems
- Developmental disruptions
- Certain neurobiological factors
- absence of social support in childhood
- Certain biological factors[7]

Clinical Manifestations

A pedophile is habitually looks particularly reliable to the children who are potential fatalities. Probable pedophiles may volunteer their services to athletic teams, Scout troops, or devout or civic organizations that serve youth. They may also maintain that they are "teaching" the child about "the facts of life" or "love"; this reasoning is recurrently offered by pedophiles who have molested children related to them. All these rationalizations may be initiate in pornography with pedophilic themes.

The three official indicators of pedophilia per the DSM-5 are:

- Tenacious and recurrent sexually touching fantasies, urges, or behaviors involving a prepubescent child experienced for at least 6 months
- Momentous distress or interpersonal challenges caused by sexual fantasies and desires involving a prepubescent child
- Having devoted an actual sexual felony in contradiction of a child.[8]

Diagnosis

According to the Diagnostic and Statistical Manual of Mental Disorders, fourth edition text revised, the following criteria must be met to establish a diagnosis of pedophilia.

- Over a period of at least six months, the affected person must experience recurrent, intense and sexually arousing fantasies, sexual urges or actual behaviors involving sexual activity with a prepubescent child or children aged 13 or younger.
- The fantasies, sexual urges or behaviors must cause clinically significant distress or impairment in social, occupational or other important areas of daily functioning.
- The affected person must be at least age sixteen and be at least five years older than the child or children who are the objects or targets of attention or sexual activity.[9]

Treatment

- Cognitive-behavioral Therapy (CBT)

CBT is one of the most investigated interventions for addressing challenging patterns of sexual arousal, and it has demonstrated some effectiveness at dipping sexual offending risk. Treatment focuses on altering behaviour through cognitive restructuring.

- Psychodynamic Therapy

Psychodynamic therapy may be a more apposite option for individuals wishing to sightsee childhood traumas, early sexual development, and personality structures.

- Relapse Prevention

Relapse inhibition is generally used in dealing for individuals who have committed sexual offenses. This approach focuses on disregarding risk factors accompanying with sexual abuse of children. Individuals learn to forestall emotional and behavioural initiations, as well as risk circumstances (e.g., watching child pornography) that could hurry sexual felonious.

- Strengths-based Tactics to Therapy

Strengths-based therapists are qualified to comprehend and appreciate the influence of the environment in uniqueness development.

Strengths-based therapy with minor-attracted individuals fosters negotiations about social stigma and its impact on their expressive and psychosocial well-being. While a strengths-based viewpoint can be integrated into most types of psychotherapies, some are more unsurprisingly suited to this approach, such as narrative therapy and compassion-focused therapy.

- Neurobiological Interventions

SSRIs are often prescribed to help diminution sexual craving, sexual urges, and compulsive sexual behavior. This method is most commonly used with individuals who have been sentenced of a sexual crime, bring into line with the main objective to reduce sexual recidivism risk.

Things To Be Considered

Coping Strategies

Main eight deal with strategies for minor-attracted individuals are:

- Self-education (learning about pedophilia from apposite sources)
- Connecting with online peer support groups
- Partaking in research
- Practicing healthy affiliation skills with same-age friends
- Journaling to externalize feelings of humiliation and other emotional problems
- Embracing movement (generating or engaging in new projects that enlarge sense of self and distinctiveness)
- Participating in events to keep engaged and inspired
- Some individuals assistance from involvement in spiritual and faith communities

Helplines for Pedophilia

- **B4U-ACT**: provides capitals for adolescents and adults undergoing minor-attraction and offers edifying chances for providers interested in working with this population.
- **ATSA**: International organization for the anticipation of childhood sexual abuse through research and education
- **Christian Pedophile**
- **Virtuous Pedophiles**: online community offering social backing for pedophiles who are stanch to non-offending living
- **Help Wanted**: online course providing tools for individuals who are concerned to children
- **The Global Prevention Project**: organization/ podcast indorsing mental wellness and prevention of childhood sexual abuse through intervention.

India and its stand on pedophilia

Pedophilia is not a crime under the Indian law, because Indian law does not recognize pedophilia at all. POCSO is the only act that is been made for saving the molestation in India. Child predatory apprehensions are valid in any country and laws to guard them must be executed. The POCSO Act, 2012 was enacted to provide a legal framework for the protection of children from crimes like sexual assault, sexual annoyance, and pornography, while safeguarding the interest of the child at each stage of the judicial procedure. The Act make available for a variety of offenses under which an defendants can be penalized. It recognizes forms of infiltration other than penile-vaginal penetration and criminalizes acts of arrogance against children too. Crimes under the act include- Penetrative Sexual Assault: Inset of penis/object/another body part in a child's vagina/ urethra/anus/mouth, or requesting the child to do so with them or some other person Sexual Assault: When a person traces the child or makes the child touch them or someone else Sexual Harassment: passing sexual remarks, sexual gestures, recurrently following, flashing them, etc.

Child Pornography The act is gender-neutral for both children and the defendant. The Act also makes abetment of a child sexual misuse an offense. So essentially, this Act only emphases on the victims and gives all the sexual criminals the same kind of punishment, but what it disregards is the mental condition of the offender. Pedophilia is a psychiatric disorder that cannot be fully pickled, so even if the criminal does his/her time in jail, it doesn't assurance that he/she will not repeat it again in the future, because of the lack of proper treatment.[10]

Misconceptions

- Pedophilia is the same as like child harassment
- Catastrophe in the brain to identify which

environmental stimuli should incite a sexual response

- Pedophilia is much more communal among men than among women.

Case Reports

Report No. 1 - Mr. A, a 70-year-old man, was hospitalized in 2005 with a history of engaging in carnal behaviour with female children 6 to 7 years old. The history was attained from Mr. A's adult son, as the patient firstly denied any problem. Throughout the last 13 years, Mr. A had been giving young girls money, later captivating them to far-flung places and undressing them and caressing their genitals. On 1 or 2 times, he had apparently attempted intercourse (founded on reports from the victims' families of vaginal bleeding). However, Mr. A's family was troubled that he may molest these children and get detained and thus locked him in the house often. Mr. A's medical history was prominent for a cataract surgery in the left eye 3 months before admission. He had no history of psychiatric or progressive problems and had exhibited no prior divergent sexual behaviour. There was no history evocative of cerebrovascular disease or dementia.[11]

Report No. 2 - A 55-year-old male salutation from middle socioeconomic bands of urban Bihar, a father to two sons prevailing as outpatient in department of Psychiatry, IGIMS, Patna escorted by his wife in month of December, 2017 with chief grievances of low mood and sensation of guilt with suicidal ideations for last 1 year. On detail valuation and history taking, patient an airport official with an regular intelligence had been freshly transferred as a corrective step from higher authorities exposed with a teary and downward gaze eyes, along with his wife who too was crying while deliberating the ordeals of her husband, that all worry and current state aroused because of his sexual attention towards little children of either sex boy or girl, which had been present for years since his adolescent days, and contempt his efforts, this magnetism remained persistent and often landed the whole family into moments of awkwardness and shame. The entire family had to recklessness their house, they had been living for years all of a sudden, his children had to leave their sequence of study and shift to this city to evade any legal significances. Consequently, he said that a crisis arose in their house, and subsequently has developed low mood and guilt to the extent of not wanting to live anymore.[12]

Conclusion

Pedophilia is a rare type of psychiatric abnormality but mostly undiagnosed as related with sensitive issues especially child molestation. So, we, authors have tried to cover the associated data regarding this this order to make society more and more aware. We hope that the readers will receive all the statistics as well as information about this condition.

List of Abbreviations

DSM-5 - Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition)

CSA - Childhood Sexual Abuse

SSRIs-Selective Serotonin Reuptake Inhibitors

POCSO - Protection of Children from Sexual Offences

MoWCD - Ministry of Women and Child Development

ATSA - Connotation for the Treatment of Sexual Abusers

CBT - Cognitive-Behavioral Therapy

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'White Room Torture' A Sensory Denial Method which Obliterates All Sense of Realism

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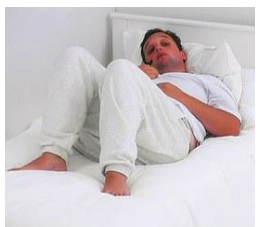
Abstract

White torture is a form of psychological torment that is generally allied with use in the middle east. The victim is garbed in white clothing and sealed in a room where each and everything including the floor, walls, ceiling, and all furniture and fixtures are painted white in colour. White walls, white bed, white floor, white clothing, white light - everything shall be must in white. On top of that, these people will also be privileged a very quiet and impenetrable or soundproof room. The victim is assisted only white food on a white plate (for example white rice) and given only white brews (such as milk) in a white cup. They are kept in this state for days to even weeks. Though it sounds inoffensive it has been stated that by grudging the brain of access to colour the victims of this agony quickly can be driven to the brink of madness. The victim often commences to suffer both visual and auditory hallucinations. If the suffering lasts long enough, they can become disjointed and even attempt to impairment themselves. But why is it so punitive that some people turn out to be miserable after doing the sentence. In this punishment, the offender will be losing the controlling power on sense organs once days, months and years passed. At last, the victim will become mentally unstable or will loss the memory especially.

Keywords: Sensory Deprivation, Epidemic, Hopelessness, Vertigo, Logical Reasoning, Migraines, Hallucination

Introduction

There is a unique type of punishment which is painstaking to be treacherous and scary, where the colour white is used to deal with gruelling prisoners. There is a punishment entitled 'white room torture' where a person is locked in an entirely white room, white walls, white door and even the food assisted will be only white rice. Even the lavatory and the set-up will be completely white in colour. There will be pin-drop hush in the cell, where the person can hear only his or her voice. After a person starts living in this room, they shortly forget things, sometimes even how their parents looked also. This torture was typically practised in Iran to make them break down mentally. After knowing about this torture, prison authorities in many countries thought that this could be applied, particularly for those who are defendant of rape cases.[1]



White torture, often raised to as white room torture, is a type of mental torture

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technique meant at complete sensory denial and separation. A prisoner is held in a cell that divests them of all sanities and distinctiveness. It is chiefly used in Iran; though, there is also evidence of its use by the Venezuelan and the United States intelligence services.[2]

Methodology

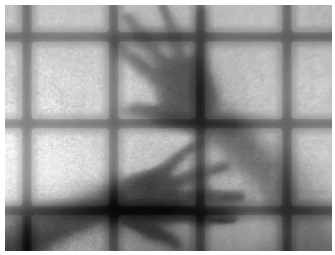
This detailed review includes open data about white room torture. Though the topic White Room Punishment is a unique type of psychological torture method mainly useful for the criminals ineffective to cruel physical tortures. This information collected from the different search engines like 'Cinahl', 'Google Scholar', 'Cochrane' etc. from plentiful review as well as research articles along with a number of renowned articles. The search borne almost 85 papers, including reviews, case reports, case series, and small clinical studies. After excluding the 30 non-English reports without an English abstract, we encompassed the remaining 55, notwithstanding of publication date.

Mechanism

Visually, the prisoner is destitute of all colour. Their cell is completely white: the ramparts, floor and ceiling, as well as their garments and food. Neon tubes are placed above the inhabitant in such a way that no glooms appear. Auditorily, the cell is impenetrable, and void of any sound, voices or social contact. Guards stand in quiet, wearing padded shoes to avoid making any noise. Prisoners cannot receive anything but themselves. In terms of taste and smell, the convict is fed white food—classically, unseasoned rice—to deprive them of these senses. Furthermore, all surfaces are smooth, raiding them of the feeling of touch. Prisoners are frequently held for months, or even years. The effects of white torture are well-documented in a number of endorsements. Classically, prisoners will become depersonalized by trailing personal identity for protracted periods of isolation; triggering hallucinations, or even psychotic breaks.[3,4]

History of White Room Torture

Evin Prison, situated in Tehran, Iran, has been a political penitentiary since 1972. The convicts there entail of activists, artists, writers, and intellectuals who are exposed to exploitation and agony. In the



month August 2021, Pardon International unconfined a statement concerning the condition within the prison walls as seen in leaked surveillance footage, saying, "It is shocking to see what goes on inside the walls of Evin prison, but sadly the abuse depicted in these leaded video clips is just the tip of the iceberg of Iran's torture epidemic." One of the forms of chastisement used in Evin is white torture — a life-threatening form of solitary quarantine used on prisoners in order to push them to sign confessions, break their resolve, or give out important information. Though, when the senses are destitute for long periods of time, the convict can experience adverse effects that may be perpetual and disparaging.

The study of sensory deprivation

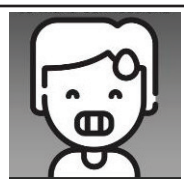
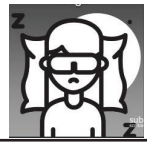
Canadian psychologist Donald Hebb showed a study on sensory deprivation that he issued in 1949 in the book titled "The Organization of Behavior." Hebb salaried volunteers — which typically consisted of college students — $20 daily to take part in a sensory scarcity study that took place at McGill University Medical Centre in Montreal, Canada. The subjects were sited in individual rooms and run-down of their senses. The study was hypothetical to last six weeks, but most of the subjects could only last a few days. One of Hebb's partners in the study, Woodburn Heron, wrote, "Nearly all of them stated that the most conspicuous thing about the experience was that they were inept to think visibly about anything for any length of time and that their thought progressions seemed to be precious in other ways," as described by Mother Jones. After coming out of seclusion, the test subjects endured cognitive tests that exhibited they were momentarily mentally impaired.[5,6]

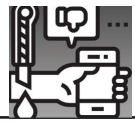
Sensory scarcity warps people's sense of time

A French scientist named Michel Siffre steered a geological study in 1962 in which he planned to perceive an underground glacier in the Alps. The study was only made-up to last for two weeks, but he protracted it to two months and reformed the focus to study human chronobiology. He thoughtful to "live like an animal," without modern amenities or

sunlight. Siffre expected to regulate whether humans have a natural internal clock. In one reasoning test, his team had him count 120 seconds. They found it took Siffre five minutes to count two minutes, meaning he "psychologically practiced five real minutes as though they were two." When the CIA imprisoned Mohamed Ben Soud in total darkness, he was incapable to track the days authorities held him captive.

Clinical Manifestation Series

Sl No.	Time	Effect	Condition (Pictorial)
1.	40 Mins	Sweating (The fitter the person is the sooner he starts to sweat)	
2.	1 Hour	Heart Palpitations (The person may feel that heart is beating too fast)	
3.	2 Hours	Stress (Stress can cause profuse sweating)	
4.	8 Hours	Vertigo (It may appear to be spinning in motion)	
5.	10 Hours	Logical Reasoning (The person's nerves will constantly misfire trying to make connections)	
6.	23 Hours	Hallucinations (Many have reported seeing points of light & geometric shapes)	
7.	1 Day	Anxiety (Women are twice as likely as men to develop it)	
8.	2 Days	Panic Attacks (They can happen when the person is sleeping)	
9.	3 Days	Sleep Patterns (They almost double in length)	

Sl No.	Time	Effect	Condition (Pictorial)
10.	5 Days	Inflammation (Its easy to develop sores on the body)	
11.	6 Days	Fatigue (Typical cycles of 36 hours awake & 12 hours sleep)	
12.	1 Week	Abdominal Pain (The person may get rid of a stomach ache in 5 mins)	
13.	2Weeks	Infection (Being isolated renders the person more vulnerable to infection)	
14.	3 Weeks	Eyes (The person's eyes deteriorate & cannot stand sunlight)	
15.	1 Month	Suicidal Thoughts (Many suicidal people give certain caveats)	
16.	2 Months	Weight Loss (Due to digestion complications)	
17.	6 Months	Sense of Reality (Becomes hard to shake off once the person is released)	
18.	1 Year	Attachment Issues (Romanian children isolated in the 1990s had serious behavioural problems)	
19.	2 Years	Psychosis (Laymen's terms, the person may go crazy)	
20.	3.5 Years	Loss of Identity (The memory may be reset or wiped clean)	
21.	20 Years	Insanity (1 in 5 people will develop mental illness in their lifetime)	

THINGS TO BE CONSIDERED

Hallucinations may be Visual, Physical or Auditory

Scientific studies show when a brain that lacks normal stimulation attempts to make sense of its surroundings, it generates hallucinations in an effort to establish a pattern. Much like a human face in the wood grain of a table, inaccessible detainees see, hear, or feel non-existent ambiances. The samples eyes' obscured by a visor, they reported visions of animals, colour patterns, and light. Some even felt electrical jolts and a tremor from a hallucinated space capsule.

The Practice Yields Questionable Data

After denial of human interface and normal stimuli, the make pliable minds of captives underwent penetrating cross-examination. Iranian convicts provided with paper customary constant pushes to write a acknowledgement to crimes against government leaders in exchange for human interface. The CIA's own KUBARK manual stated the deprivation method pushed "a subject's propensities toward obedience" as they were frantic for company, even their captors'. Ahmed Errachidi, who was destitute of sleep and isolated, broke under interrogation from personnel at Guantanamo Bay.

Sensory Scarcity May Be Used for Curative Instead of Aching

While subjects forced into sensory deficiency suffer harshly, those who seek it willingly may benefit from complete remoteness. Sensory deprivation is an incipient treatment for stress and anxiety, and it's growing in admiration. Meehan Crist of Nautilus vexed a sensory deprivation tank, which is fundamentally an enclosed bathtub filled with saltwater. Pitch black and soundproof, the measured version of this technique often leads to pleasant hallucinations that some compare to a drug-induced experience.[6]

White Torture Appeared from CIA Research into Brainwashing

During the Cold War, the CIA instigated researching a way to reproduce the mind-control tactics hired by countries in opposition to America. They perceived American soldiers in Korean POW camps transporting anti-US and pro-communist statements, which urged the idea of brain-washing. Hebb in book form his findings in The Canadian Journal of Psychology, though he camouflaged it as a study about the effects of living a inactive and uninteresting lifestyle.

Sensory Deprivation May Leave No Physical Mark, So It's Frequently Ignored

Waterboarding is an interrogation technique that includes pouring water into a prisoner's breathing passages to estimate the feeling of being drowned. The practice increased fame during the Spanish Inquisition and sustained until it was outlawed by the Geneva Convention in 1949; the technique's toxic physical effects place it firmly in the category of torture.

Why is "white room torture" shoddier than other torture?

The only reason this is factual is because it's so naive. Gazing at knives puts more fear into a person but he or she at least have something to cause the emotion of fear. Everything is just one colour wherever the person looks. It's like the person are detained in to the point where every angle the person looks him or her will see the same thing.[9]

Filmy References

German artist Gregor Schneider built his room strategy of "Weiße Folter" on this idea.[7]

The TV Series named Brave Episode 10 "Desperate Measures" January 8, 2018. A team member is held in an Iranian black site for grilling. The room is all white, as is her and the sentries clothing and the negligeable furniture. The interrogator explains it is intended to cause sensory deprivation, and that bits of colour will be added as she begins to cooperate.[8]

In 2022 Indian picture, Rorschach, the protagonist Luke Antony is exposed to White Room torture in Dubai Prison.

THE WHITE TORTURE EXPERIENCE

Report No. 1 - Amir Fakhravar was a convict in Evin Prison who was exposed to white torture. In

a conference with CNN, Fakhravar thorough his experience. "We didn't see any colour, all of the cell was white in colour, the floor was white, our clothes were white and the light too, 24 hours, was white," he told. If prisoners wanted to use the toilet, they would slip a white piece of paper under the door and be ushered by protectors with amplified shoes to avoid making noise. Fakhravar endured separation in the white room for eight months, and by the time he got out, he said he couldn't reminisce the faces of his parents.[5]

Report No 2- A Trio of Hikers Were Imperilled to Isolation in Iranian Prison

In the year 2009, Sarah Shourd, her fiancé Shane Bauer, and their colleague Josh Fattal erroneously trekked over the border unravelling Iraqi Kurdistan from Iran. In detention as spies, the three went to Evin prison in Tehran. Shourd and her male friends spent an appraised 410 days curbed to individual cells without human interface. Shourd veteran panic attacks, hallucinations, and unadorned anxiety during her incarceration. She inscribes: "After two months with next to no human interaction, my mind started to slip. Some days, I perceived phantom footsteps coming down the hall. I spent large portions of my days squatted down on all fours by a small slit in the door, heeding." After her proclamation in September 2010, doctors detected Shroud with PTSD, illustrating the practice's long-term psychological impairment.[6]

Report No 3- Many Victims Say the Method Was Shoddier Than Physical Ferocity

A 2016 study by John Leach, of Thrilling Environments Laboratory at University of Portsmouth, directed a lack of social collaboration for prolonged periods of time causes sufferers to experience struggle in launching what is real and what is not. As social beings, humans' brains brawl to adapt to an remote way of life, and many people experience mental breakdowns with perpetual psychological consequences.[6]

CONCLUSION

White Room Torture is another strange type of torture that some countries still practise today as a punishment to those that are imprisoned. It's a severe, pathetic but effective punishment especially for cruel criminals. So, we, authors have vexed to cover the allied data regarding this this order to make society more and more aware. We hope that the readers will obtain all the information about this condition.

LIST OF ABBREVIATIONS

DSM-5- Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition)

CIA- Clinical Impairment Assessment

KUBARK- KUBARK COUNTERINTELLIGENCE INTERROGATION

POW-Prisoner of War

CNN- Convolutional Neural Network

PTSD- Post-Traumatic Stress Disorder

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REFERENCE

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A Study to Assess the Effectiveness Of Structured Teaching Programme on Knowledge Regarding Hand Exercise in Prevention of AV Fistula Dysfunction among Hemodialysis Patient In Selected Hospital, Tumkur

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ABSTRACT

Health is wealth; this phrase is very popular because happiness lies in the health of man. Good health helps to develop charm, grace, and happy mind. Kidneys are a pair of bean shaped organs located either side of the lower back just below the rib cage. Renal failure is the severe impairment or total lack of kidney function. Chronic Renal Failure (CRF) develops insidiously overtime and necessitates the initiation for long term survival.1 Dialysis is used to remove fluid and uremic waste products from the body when the kidneys are not able to do so. It is the best method to use arteriovenous fistula (AVF) as a vascular access. Compared to other vascular access such as venous catheter and a synthetic graft, arteriovenous fistula is most used method as it has fewer complications. Complications can occur even if we are careful, but are much less common if you take a few precautions. Hand exercise is essential to perform in prevention of AV fistula dysfunction. The aim of the study was to assess the effectiveness of Structured Teaching Programme on knowledge regarding Hand exercise among Hemodialysis patients in selected hospital, Tumkur.

Methods: n evaluative approach with pre-experimental one group pre-test post-test design was used with purposive sampling technique to select the sample (N=50). A structured knowledge questionnaire was used to assess the Knowledge and STP was administered to find its effectiveness. The collected data was analyzed by using Descriptive statistics like mean, median and standard deviation, and inferential statistics like paired and independent't' test was included to test the hypothesis and Chi-square test was included to test the association of knowledge scores with demographic variables.

Results: The mean percentage of post-test knowledge score (79.09 %) was higher than the mean percentage of pre-test knowledge score (36.54%). The calculated' value [t (49) = 21.01] is greater than the table value (0.05, 49df) = 1.96. It showed a significant difference between mean pre- and post- test knowledge scores. Calculated x2 values are showed no significant association between any of the variables with their post-test knowledge scores. Therefore, no significant association was found between these other variables and post-test knowledge level of Hemodialysis patients.

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Interpretation & Conclusion: The findings of the study showed that there was a deficit in knowledge of Hemodialysis patients before administration of STP. The results indicated that the STP is effective in increasing the knowledge of Hemodialysis patients on Hand exercise.

Keywords: Effectiveness, STP, Knowledge, Hand exercise, Hemodialysis patients.

INTRODUCTION

Health is wealth; this phrase is very popular because happiness lies in the health of man. Good health helps to develop charm, grace and happy mind.

There is a pair of organs, which are always compared with "the mother of a family". They show the significance of sacrifice. Very precious, valued during and after life; not considered when intact but receives more concern when dysfunctional. So care when it is intact. They are nothing but the retroperitoneal "kidneys".

Kidneys are a pair of bean shaped organs located either side of the lower back just below the rib cage. Their job is to filter and remove organic wastes from the blood. Then they get rid of this waste along with excess salt and water through urine. The products they filter include toxic byproducts of cellular activity (free radicals), alcohol, drugs, excess proteins, minerals. Some of these are quite toxic and do damage. Just imagine if the toxins and waste products are not getting flushed out of our body, where do they go? They can stay there and can cause a kidney infection or kidney problems.[1] Proper functioning of urinary function is essential to life. Dysfunction of the kidney may occur at any age and with varying levels of severity. Renal failure is the severe impairment or total lack of kidney function. In renal failure there is an inability to excrete metabolic waste products and water as well as functional disturbances of all body systems.[2]

The global scenario of End Stage Renal Disease (ESRD) patients shows that the incidence is increasing by an average of 7.8% per year.[2]

Hemodialysis is the method for removing waste products from the blood when the kidneys are in failure. Hemodialysis is one of the three renal replacement therapies, the other two being renal transplant and peritoneal dialysis. Hemodialysis can be an outpaient or inpatient therapy. Routine hemodialysis is conducted in a dialysis outpatient facility.[3]

As for CRF patients, hemodialysis should be repeated three times a week for at least three to four hours per dialysis; it is the best method to use arteriovenous fistula (AVF) as a vascular access. Compared to other vascular access such as venous catheter and a synthetic graft, arteriovenous fistula is most used method as it has fewer complications.[4]

An AVF is the optimal vascular access for chronic hemodialysis. Fistulas have the best overall patency rates with the least number of complications such as thrombosis and infections. Successful AVF maturation involves arterial and venous dilation. As many studies have proven that the use of AVF is increasing day by day, the importance of care for it also has become unavoidable. Patients with AV fistula should do Hand-Arm exercises to strengthen and mature the fistula. It is important to take care of the vascular access to prevent complications.[5]

OBJECTIVES OF THE STUDY

1. To assess existing knowledge regarding hand exercise in prevention of AV fistula dysfunction among hemodialysis patients in selected hospital at Tumkur.
2. To evaluate the effectiveness of structured teaching programme on knowledge regarding hand exercise in prevention of AV fistula dysfunction among hemodialysis patient in selected hospital, Tumkur".
3. To find an association between the post-test knowledge scores regarding hand exercise in prevention of AV fistula

dysfunction among hemodialysis patient in selected hospital Tumkur.

HYPOTHESES

The following hypotheses were formulated for the study:

- **H1**: There will be significant difference between mean pre-test and post-test knowledge score among hemodialysis patients.
- **H2**: There will be significant association between post-test knowledge score of hemodialysis patient and their selected demographic variables.

RESULTS

Table 1 and Figure 1 depicts the pretest and posttest and enhanced mean percentage of Knowledge scores of respondents regarding Hand exercise . In pre-test, overall mean percentage of knowledge score was 36.54% and that of the post-test was 79.09% with the enhancement of 42.66%. The statistical paired 't' value 21.01 is greater than the table value 1.96 which implies that the difference between the pre-test and post-test knowledge scores found to be statistically significant at 5% level. Hence stated null hypothesis $\mathbf{H}_{01}$ is rejected in relation to all aspects of knowledge and research hypothesis $\mathbf{H}_{1}$ is accepted.

Table 1: Comparison Between Pre-Test and Post-Test Knowledge

Section I :	Comparison Between Pre-Test and Post-Test Knowledge Score of Respondents and Effectiveness of Stp
H1	There will be significant difference between mean pre-test and post-test knowledge score among hemodialysis patients

* Significant at 5% level,
t (0.05, 49df) = 2.02

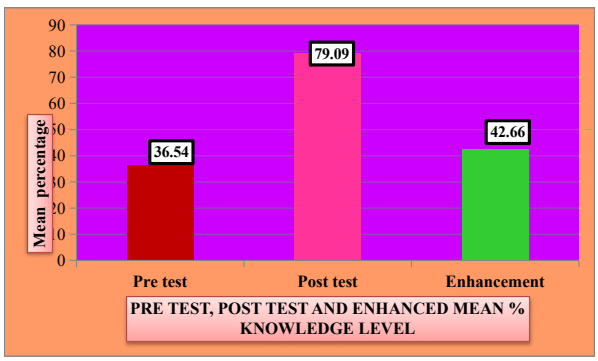

Fig. 1: Mean percentage of pretest and posttest and enhanced Knowledge scores of respondents regarding Hand exercise.

Table 2: Association Between Selected Demographic Variables and Post-Test Knowledge Scores

Section IiI :	Association Between Selected Demographic Variables and Post-Test Knowledge Scores.
H2 :	There will be significant association between post-test knowledge score of hemodialysis patient and their selected demographic variables.

IMPLICATIONS

The results obtained from the study helped the researcher to derive certain implication. The implications of this study are important in the areas of nursing education, nursing practice, nursing administration and nursing research.

Nursing Education

Nursing education in the public health care is more concerned about the prevention rather than the cure. Therefore, the content and practice elements of Renal failure, Dialysis and care of AV fistula and Exercise to prevent AV fistula dysfunction should be incorporated into the curricula of Diploma, Baccalaureate and Master's programs in Nursing.

Nursing Practice

The obligation of the nursing profession is the provision of care and service to the human beings. Most of Hemodialysis patients are not aware about hand exercise in prevention of AV fistula dysfunction, because of ignorance,

lack of knowledge and not utilization. Use of adaptive measures is very important in-home practice as they are very helpful for the prevention of AV fistula dysfunction and maintain the good health. They should regularly assess and nurse them in both physical and mental angles. Nurses should conduct training programs for Renal patients and Care givers.

Nursing Administration

Nurse Administrators should plan and organize continuing nursing education programs regarding Renal failure, Dialysis and care of AV fistula and Exercise to prevent AV fistula dysfunction for staff and students in educational institutions with the help of Medical surgical nursing departments.

Nursing Research

Nursing practice need to be based on scientific knowledge. Research should be focused on health promotion programs using various methods and techniques in evaluating their effectiveness.

Ethical clearance: This article is a purely a narrative review article hence it is not required an ethical clearance.

Source of funding- Self (review article)

Conflict of Interest - Nil

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Original Article

Effectiveness of Nurse-Led Educational Intervention on Knowledge Regarding Management of Chronic Kidney Disease among Patients

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Abstract

Background: Chronic kidney disease (CKD) is defined as kidney damage or glomerular filtration rate (GFR) <60 mL/min/1.73 m^2 for 3 months or more, irrespective of the cause. CKD can progress to end-stage renal disease (ESRD), which requires renal replacement therapy (RRT) and is associated with morbidity and mortality at all stages. Nurse-led educational interventions play an essential role in improving the awareness of patients, thereby enhancing their quality of life. **Purpose:** The study assessed the effectiveness of nurse-led educational intervention (NLEI) on knowledge of patients with CKD. **Methods:** The patients' level of knowledge was assessed using an 18-item Chronic Kidney Disease Patient Awareness Questionnaire. An NLEI was administered to 50 patients with CKD. The data were analyzed using Statistical Package for the Social Sciences (SPSS) version 21. **Discussion:** The pretest mean knowledge score was 40.42 and SD was ±4.09. The posttest mean knowledge score was 62.52 and SD was ±4.29. The paired *t*-test showed $t = 26.35$, df = 49. Significant association was found between the knowledge of patients and their dietary habits @ $P \leq 0.05$. **Conclusions:** NLEI was effective in enhancing the knowledge of CKD patients. This implies that when appropriately implemented, the CKD patients will reap the benefits of NLEI, which has the potential to improve their health status.

Keywords: chronic kidney disease, health education, health status, knowledge

Introduction

Chronic kidney disease (CKD) is defined as kidney damage or glomerular filtration rate (GFR) <60 mL/min/1.73 m^2 for 3 months or more, irrespective of the cause.[1] The six grades of CKD are classified based on GFR. It includes G1: GFR 90 mL/min/1.73 m^2 and above, G2: GFR 60 to 89 mL/min/1.73 m^2, G3a: GFR 45 to 59 mL/min/1.73 m^2, G3b: GFR 30 to 44 mL/min/1.73 m^2, G4: GFR 15 to 29 mL/min/1.73 m^2, and G5: GFR less than 15 mL/min/1.73 m^2 or treatment by dialysis.[2] CKD can progress to end-stage renal disease (ESRD), which requires renal replacement therapy (RRT) and is associated with morbidity and mortality at all stages. With the increasing prevalence and incidence of CKD and ESRD, CKD is becoming a major health concern worldwide and is associated with high costs and poor outcomes.[3]

CKD accounted for 2,968,600 of disability-adjusted life years and 2,546,700 of life years lost in 2012.[4] In 2019, the low-income countries (LICs) had the highest age-standardized disability-adjusted life years (DALY) rate at 692.25 per 100,000 people, followed by lower middle-income countries (LMICs) and upper middle-income countries (UMICs). The age-standardized years of life lost (YLL)

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rate was much higher than the years lived with disability (YLD) rate in various income regions. From 1990 to 2019, the age-standardized DALY rate showed a 13.70% reduction in LICs and 3.72% increment in LMICs. Age-standardized YLD rate was higher in female patients than in male patients, whereas age-standardized rates of YLL and DALY of CKD were all higher in male patients than in female patients in LMICs globally.[5]

In 2015, according to United States Renal Data system, there were 124,411 new ESRD cases reflecting an increasing risk of kidney failure. Moreover, the prevalence of CKD has been rising consistently by about 20,000 cases every year.[6] The reported prevalence in USA is 6% at the age of 18–44 years and 38.1% at the age more than 65 years.[7] Furthermore, CKD is the ninth leading cause of death in the United States.[8] The estimated global prevalence of CKD is 13.4% (11.7–15.1%). The patients with ESRD requiring RRT are estimated to be 4.902 to 7.083 million.[9] The global all-age prevalence and mortality from CKD between 1990 and 2017 increased by 29.3% and 41.5%, respectively.[10] The prevalence of CKD increases with age and mostly people aged 60 years or more are getting affected. The old age people, male gender, non-Caucasian ethnicity especially African–Americans, Hispanics, Afro–Caribbean, and Asians are badly affected by the progression of CKD.[11] In addition, the cause for increase in the global incidence and prevalence of CKD is the rise in type II diabetes mellitus, hypertension, and obesity.[12]

In India, a 38% increase in the proportion of deaths occurred due to kidney failure between 2003–2004 and 2010–2013.[13] In a recent Indian CKD study, it was observed that mostly male patients were affected; the mean ± SD of age was 50.3 ± 11.8 years and the median EGFR was 40 mL/min/1.73 m^2. Majority of the participants were hypertensive, diabetic, and CVD-affected having a history of acute kidney injury.[14] Moreover, the age-adjusted incidence rate of ESRD in India is 229 per million population and >100,000 new patients require RRT annually.[15] The prevalence of CKD in different regions of India ranges from <1% to 13%.[16] However, certain parts of India, namely, Andhra Pradesh, Goa, and Odisha have higher rates of CKD due to unknown etiology.[17] The outcomes of CKD are influenced by disease-related risk factors, sociodemographic variables, genetic differences, and access to healthcare resources.[14] Therefore, screening for CKD should be a priority in low-, middle-, and high-income countries, as early intervention would minimize the high risk of morbidity and mortality. Moreover, this will help the healthcare sector to achieve cost-effective prevention.[18]

As CKD is a growing health problem and is becoming increasingly common, adequate knowledge of the disease is essential to reduce its progression. Literature states that most of the patients with CKD are unaware of their disease management.[19-21] Knowledge and awareness regarding CKD among the patients is an important factor for the successful implementation of CKD prevention and screening programs.[22] Moreover, well-structured, interactive, and multidimensional individual or group educational interventions would improve the knowledge, self-management, and patient outcomes.[23]

The self-management intervention offers strategies to delay CKD progression and to encourage motivation to better self-manage at home. Self-management education and psychosocial support with culturally relevant scenarios are found to enhance the knowledge and management of CKD at home.[24] In addition, nurse-led disease management program seems effective to improve some parameters of quality of life for patients with chronic kidney disease.[25] Likewise, nurse-led educational intervention (NLEI) has a positive effect on the kidney disease, physical and mental health among the adults with T2D and end-stage renal disease.[26] Having adequate knowledge on CKD management would prevent or delay the progression of the kidney disease. Therefore, the authors of this study determined the effectiveness of NLEI on the knowledge of patients with CKD.

Methods

Research approach

The study involved a quantitative research approach.

Research design

The study utilized one group of pretest, posttest, and preexperimental research design to evaluate the effectiveness of NLEI on the knowledge of patients with CKD.

Setting

The study was conducted in a selected setting in Hassan, Karnataka, India. The selection of the setting was done on the basis of geographic proximity, feasibility to conduct the study, and availability of the samples. It was a government hospital with 750 bed strength. All the facilities including ICUs, medical, surgical, gynecological, nephrology, and pediatric units were available. Every year, approximately 750 CKD patients got treatment in this hospital. The hospital had a dialysis unit with 10 machines.

Population

Both male and female patients with CKD were selected as study population.

Samples

Fifty patients with CKD who are getting treatment in a selected hospital in Hasan, Karnataka, India, meeting the inclusion criteria were selected as samples for the study. The sample was selected using the following formula:

$$N = (z_\alpha + z_\beta)^2 \,/\, (\delta/)^{\,2} = 48.08$$

where N = estimated sample size

For $\alpha = 0.05$, $z_\alpha = 1.96$; for $\beta = 0.20$, $z_\beta = 0.84$.

δ = clinically significant difference = 3.

σ = standard deviation of the differences = 7.43.

Sample selection criteria

Patients who were attending nephrology OPD and in-patients with CKD and the patients who were willing to participate in the study were included in the study. The patients who were not available during the data collection period were excluded from the study.

Sampling technique

The samples were selected through convenient sampling technique.

Description and interpretation of the tool

Section A comprised of demographic data of the participants. It comprised of nine items including age, sex, religion, marital status, educational status, occupation, any previous information acquired regarding CKD, dietary habits, and family history of CKD. Section B consisted of Chronic Kidney Disease Patient Awareness Questionnaire developed by Peng *et al*.[27] This Likert scale was designed to assess the awareness of knowledge of CKD patients. This was a self-administered scale for patient-reported outcome assessment. This Likert Scale scored from *know nothing about it* to *know clearly* with the score ranging from 0, 1, 2, 3, and 4 points. Total score could be calculated by summing up all the 18 items. Higher score represented better perceived disease awareness with full credit of 72 points.

Translation of the tool

The tool was translated to Kannada language and retranslated to English language. Then, again, the tool was translated to Kannada language to check the clarity of the items, ambiguity of the language, and feasibility of the tool. The average time taken to complete the tool was approximately 20 minutes. The language of the tool was found simple and easy to understand.

Reliability and validity of the tool

The prepared instrument was submitted to seven experts including nephrologists, nutritionists, and medical surgical nursing experts to establish the content validity. The tool got its final shape after the modifications based on the opinions of the experts. The CVV index was 0.80. The reliability of the translated tool was 0.98.

Description of intervention

The NLEI comprised of information related to CKD and its management. It included the contents, namely, controlling the blood pressure, meeting the blood glucose goal if having diabetes, working with the healthcare team to monitor the kidney health, taking medicines as prescribed, working with a dietitian to develop a meal plan, making physical activity part of routine, aiming for a healthy weight, getting enough sleep, stop smoking, and finding healthy ways to cope with stress and depression. The NLEI was reviewed and validated by the experts. The NLEI was delivered using PowerPoint slides and pamphlets. The intervention lasted for 45 minutes. The doubts of the participants were clarified.

Ethical considerations

Ethical approval was obtained from the Research and Ethics Committee of Sri Jaya Chama Rajendra hospital, Hasan, Karnataka, India. Formal permission was obtained to collect the data from the CKD patients. The principal investigator personally visited each participant, introduced herself to CKD patients, and explained the purpose of the study and ascertained the willingness of the participants. The participants signed in the written informed consent form. The respondents were assured of anonymity and confidentiality of the information provided by them. The participants were not compelled to participate in the study. They were given the freedom to withdraw from the study at any point of time.

Procedure for data collection

The data were collected by the principal investigator from September 26, 2019 to October 29, 2019 in the chosen hospital. Pretest was conducted by distributing the questionnaire to the CKD patients. It took approximately 20 minutes to complete the questionnaire. Soon after the pretest, the NLEI was given to the participants. On the 8th day, the posttest was conducted by using the same tool to determine the effectiveness of NLEI.

Plan for data analysis

The data were analyzed using descriptive and inferential statistics.

Results

Table 1 shows the demographic variables of study participants. In our study, 50% of the samples belong to the age group of 40 to 45 years, whereas 36% belong to age group of 50 to 65 years, 10% belong to the age group of 30 to 35 years, and 4% belong to the age group of 25 years. Of the participants, 76% were male patients and 24% were female patients. In addition, 50% were Hindus, 40% were Muslims, and 10% were Christians. With regard to marital status, 76% of them were married, 10% were divorced and widowed, and 4% of them were unmarried. Considering the educational status, 40% had completed their primary education, 30% had acquired adult literacy, 20% had achieved secondary education, and 10% of the samples had attained PUC and degree as educational qualification. Majority (40%) of them were coolie workers, 30% of them were doing agriculture, 20% were private workers, and 5% were professionals. Regarding previous information acquired regarding CKD, 60% of them mentioned that they received information from

physicians, 20% received it from health personnel, 14% received it from newspapers, and 6% received it from Television. Considering the dietary habits, majority (80%) of the patients were nonvegetarians and the remaining 20% of them were pure vegetarians. Most of the patients (60%) had a family history of CKD and only 20% did not have a family history of CKD [Table 1].

Figure 1 illustrates the frequency and percentage distribution and mean and SD of pretest knowledge scores among CKD

Table 1: Sociodemographic variables of patients with chronic kidney disease

Sl. No.	Sociodemographic variables	Categories	Frequency (No)	*N* = 50 Percentage [%]
1	Age in years	25	02	4
		30–35	05	10
		40–45	25	50
		50–65	18	36
2	Gender	Male	38	76
		Female	12	24
3	Religion	Hindu	25	50
		Muslim	20	40
		Christian	05	10
4	Marital status	Married	38	76
		Unmarried	02	4
		Divorced	05	10
		Widowed	05	10
5	Educational status	Non formal education	15	30
		Primary education	20	40
		Secondary education	10	20
		PUC and Degree	05	10
6	Occupation	Cooli	20	40
		Agriculture	15	30
		Private workers	10	20
		Professional	05	10
7	Any previous information acquired regarding CKD	Physician	30	60
		Any health personnel	10	20
		News paper	07	14
		Television	03	6
8	Dietary habits	Vegetarian	10	20
		Nonvegetarian	40	80
9	Family history ofCKD	Yes	30	60
		No	20	40

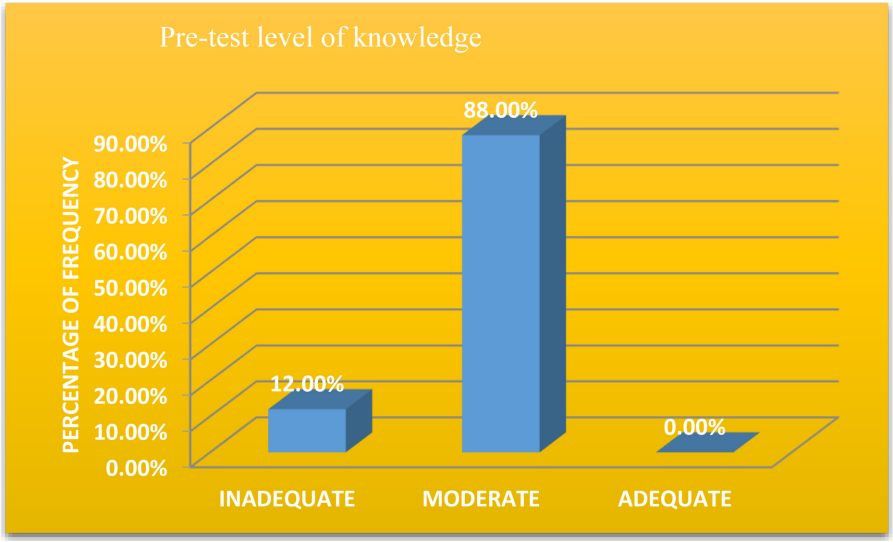

Figure 1: Bar diagram showing the pretest level of knowledge of patients on chronic kidney disease.

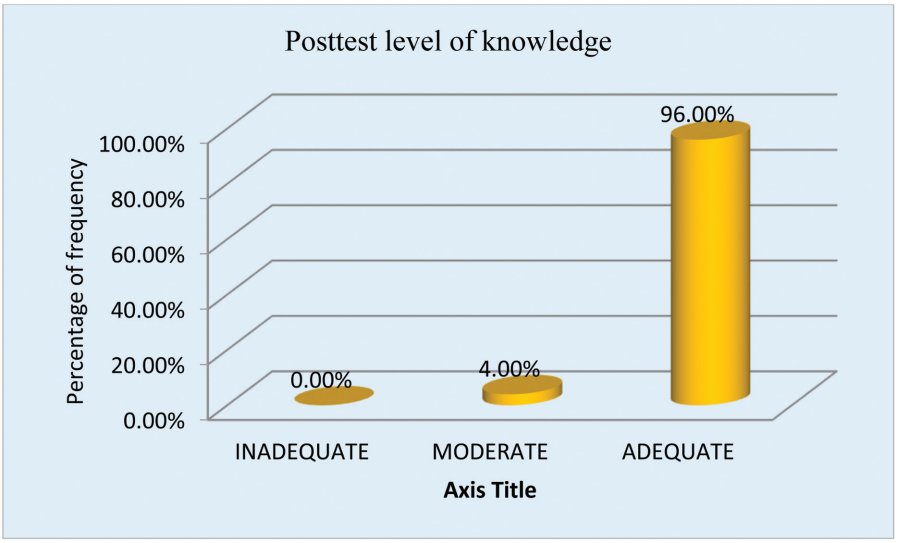

Figure 2: Cylinder diagram showing the posttest level of knowledge on chronic kidney disease.

Table 2: Pretest level of knowledge of patients with chronic kidney disease

Level of knowledge		Level of knowledge Scores		Frequency	*N* = 50 Percentage
Inadequate		<50%		6	12.0%
Moderate		50–75%		44	88.0%
Adequate		>75%		0	0.0%
Total				50	100.0
Aspects	**Maximum possible score**	**Minimum**	**Maximum**	**Range**	**MeanandSD**
Pretest knowledge scores	72	29	45	16	40.42±4.09

patients. Of the participants, 12% had inadequate knowledge, whereas 88% had moderately adequate knowledge. None of them had adequate knowledge. The overall mean and SD of pretest knowledge was 40.42 ± 4.09 [Table 2]. Figure 2 demonstrates the frequency and percentage distribution of posttest knowledge scores among CKD patients. Table 3 shows the mean and SD of posttest knowledge scores among CKD patients. None of them had inadequate knowledge in the posttest. A small portion (4%) had moderately adequate knowledge. However, a large portion (96%) had gained adequate knowledge in the posttest. The posttest mean knowledge score was 62.52 and the SD was ±4.29 [Figure 2]. The pretest and posttest level of knowledge among patients with chronic kidney disease is shown in Figure 3.

Table 4 shows the mean enhancement knowledge scores of CKD patients. The NLEI had shown to be effective in enhancing the knowledge of CKD patients with the enhancement score of 22.1. The paired *t*-test showed the value of 26.35 at 0.05 level. Lastly, Table 5 outlines the association between the pretest knowledge scores of CKD patients and their demographic variables. Significant association was found between the pretest knowledge scores and dietary habits @ $P \leq 0.05$ level.

Discussion

We determined the effectiveness of NLEI on the knowledge of patients with CKD. In our study, in the pretest, majority of CKD patients had moderately adequate knowledge and few of them had inadequate knowledge. In consistent to our study findings, most of the studies reported that the patients with CKD had inadequate knowledge regarding CKD and its management. For instance, a study conducted in Malaysia showed that the general medical patients had inadequate knowledge of CKD, especially, the people who are at risk of developing CKD are not aware of their risk of developing CKD and its complications. Therefore, the authors recommended that increasing the awareness on CKD is of paramount importance for its successful primary and secondary prevention.[28]

Likewise, another study conducted among Iranian population who attended kidney disease awareness campaign revealed that their knowledge on CKD is low. Of the participants, only

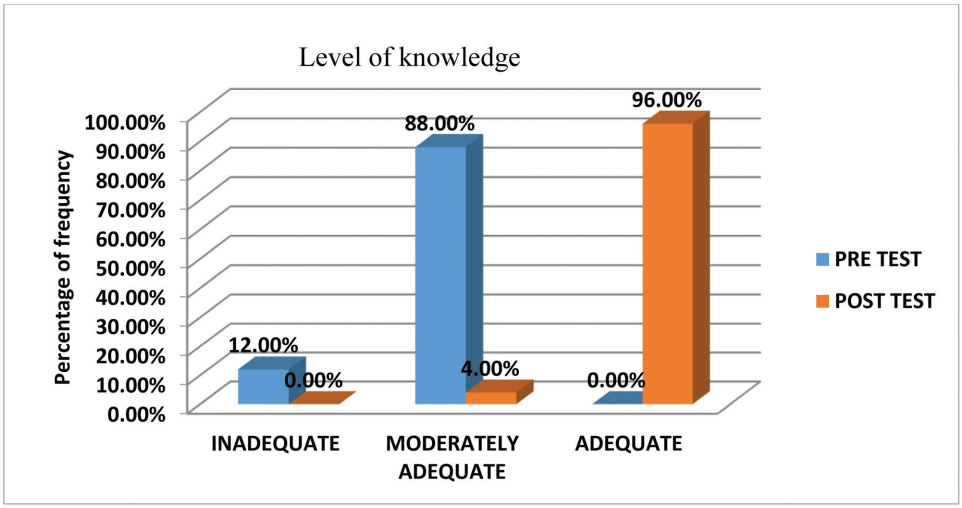

Figure 3: Bar diagram comparing the pretest and posttest level of knowledge among patients with chronic kidney disease.

Table 3: Posttest level of knowledge of patients with chronic kidney disease

Level of knowledge	Level of knowledge scores	Frequency	$N = 50$ Percentage
Inadequate	<50%	0	0.0%
Moderate	50–75%	2	4.0%
Adequate	>75%	48	96.0%
Total		50	100.0

Aspects	Maximum possible score	Minimum	Maximum	Range	Mean	SD
Posttest knowledge scores	72	53	72	19	62.52	±4.29

Table 4: Enhancement knowledge scores among patients with chronic kidney disease

Aspects	Mean			Mean%			$N = 50$ Calculated paired *t* test value
	Pretest	Posttest	Enhancement	Pretest	Posttest	Enhancement	
Overall knowledge scores	40.42	62.52	22.1	56.14	86.83	30.69	26.35**(S)df = 49**

(S) = Significant at $P \leq 0.05$ level.

10.4% knew that CKD could be asymptomatic in the initial stages, whereas only 14.4% knew that diabetes and hypertension are the risk factors for CKD. Thus, the recommendation was given to put efforts in educating the Iranian community about the importance of regular renal care counseling.[29] Additionally, Al Rahbi and Al Salmi[30] reported 64% of the patients having inadequate knowledge of CKD. It shows that a major portion of patients was unaware of CKD and its management. Hence, patients and family should receive adequate information regarding the nature of kidney disease and the available treatment options. This will allow them to make informed decisions about the management of CKD.

Recently, Molnar *et al.*[31] mentioned that only 25% of the patients correctly answered that CKD can be associated with no symptoms. Moreover, more than 60% of participants perceived themselves having no knowledge about the medications that help or hurt their kidney. Additionally, old age was associated with lower perceived knowledge about CKD and its management. Again, in line with our study findings, Sahu *et al.*[32] found that majority (63.6%) of the relatives of the CKD patients had poor knowledge and poor attitude (51.6%) toward the risk of CKD. Thus, it is very clear that most of the patients across the world have inadequate knowledge regarding CKD.

Considering the literature that showed a vast majority of the patients were unaware of CKD and its management, the investigators of this study developed an NLEI to enhance the knowledge of patients on CKD. Our study found that the NLEI was effective in improving the knowledge of patients

Table 5: Association between pretest level of knowledge of study participants and their sociodemographic variables.

Sl.No.	Demographic variables	Categories	$N = 50$			
			Pretest knowledge level		Calculated χ^2 value	df
			Inadequate	Moderate		
1	Age in years	25	1	1	3.43(NS)	3
		30–35	0	5		
		40–45	3	22		
		50–65	2	16		
2	Gender	Male	4	34	0.32(NS)	1
		Female	2	10		
3	Religion	Hindu	3	22	0.85(NS)	2
		Muslim	3	17		
		Christian	0	5		
4	Marital status	Married	4	34	3.79(NS)	3
		Unmarried	1	1		
		Divorced	1	4		
		Widowed	0	5		
5	Educational status	Non formal education	2	13	1.38(NS)	3
		Primary education	2	18		
		Secondary education	2	8		
		PUC and Degree	0	5		
6	Occupation	Cooli	2	18	4.22(NS)	3
		Agriculture	1	14		
		Private workers	3	7		
		Professional	0	5		
7	Any previous information acquired regarding CKD	Physician	3	27	1.16(NS)	3
		Any health personnel	2	8		
		News paper	1	6		
		Television	0	3		
8	Dietary habits	Vegetarian	1	9	0.04(S)	1
		Nonvegetarian	5	35		
9	Family history of CKD	Yes	6	24	4.54(NS)	1
		No	0	20		

NS = not significant, S = significant at $P \leq 0.05$ level.

on CKD. In congruent to our study findings, it was found in a study that the structured teaching program enhanced the knowledge of patients with CKD.[33] Likewise, another study had shown the effectiveness of e-health interventions on improving the knowledge of CKD patients.[34] Another study conducted among chronic renal failure patients undergoing hemodialysis has shown that the planned teaching program improved the quality of life and level of fatigue among the patients.[35]

Lopez-Vargas *et al*.,[36] conducted a systematic review of 26 studies to determine the efficacy of educational interventions on the knowledge, self-management, and patient outcomes. The review concluded that well-designed, multifaceted, and frequent educational interventions that include both individual and group participation may improve the knowledge, self-management, and patient outcomes. We, therefore, conclude that the NLEI designed by us is very effective in enhancing the knowledge of patients with CKD as shown in the above-cited literature. Furthermore, we recommend all the nurses working in the hospitals and community settings to educate the patients and caregivers on the early identification and management of patients with CKD.

Limitation

The study limits its generalizability as the NLEI was tested only in a small group of participants in a single setting.

Implications

Nursing professionals shall provide NLEI as part of their routine care, which will be effective in enhancing the patients' knowledge on CKD. Nurse educators shall emphasize the nursing students to teach the CKD patients regarding the renal disorders and its management. In-service education can be planned and provided to the nursing professionals on CKD updates. Study materials can be prepared and distributed to the nursing professionals and patients to have updates on CKD. Nurse educators can work with the hospital authorities to draw up a special policy based on current clinical practice guidelines. Nurse administrators should plan and organize a staff development programme on effects of renal disorders and its management. Nurse researchers can develop appropriate health education tools for educating the CKD patients regarding renal disorders and its management according to their demographic, socioeconomic, cultural, and political characteristics. Nurses should come forward to take up

unsolved questions in the field of renal disorders and its management among CKD patients and publish them for the benefit of patients, public, and nursing fraternity. The public and private agencies should also encourage research in this field through materials and funds.

Recommendations

The authors recommend organizing frequent educational interventions to motivate the CKD patients to keep them updated with necessary knowledge regarding renal disorders and its management. Because this study was carried out on a small sample, the results can be used only as a guide for further studies. A similar study on a large sample may help to draw more results that are definite. A similar study can be conducted using descriptive exploratory approach to identify the determinants of lack of awareness on CKD, which might generate hypothesis for future research. A study can be conducted using different methods of teaching to determine the most effective method of teaching.

Conclusion

We conclude that every hospital should initiate NLEI to enhance the knowledge of patients with CKD, thereby improving the quality of their life.

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Conflicts of interest

The authors declare that they do not have any conflict of interest.

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Obstetrics & Gynecology

PERINEOTOMY CARE AFTER CHILDBIRTH

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ABSTRACT Every woman who became pregnant has to undergo the process of delivery. In normal process of delivery the baby is delivered per vagina, an episiotomy is performed by health care provider or midwife. Episiotomy is a surgically planned incision on the perineum and the posterior vaginal wall during the second stage of labour to enlarge the vaginal introits so as to facilitate easy and safe delivery of the fetus. Episiotomy may be advice in the situations such as inelastic perineum, fetal distress, and complicated birth, prolonged second stage of labor, instrumental vaginal delivery and previous perineal surgeries .There are four types of episiotomy: midline, mediolateral, lateral and J shaped. Care of episiotomy involves perineal care, sitz bath, infrared heat, perineal exercises, antiseptic ointments, cold and hot packs The REEDA scale is used for assessing the perineal healing. Complications of episiotomy include perineal discomfort, perineal pain, difficulty with breast feeding and walking, perineal bleeding, infection, wound dehiscence and dyspareunia.

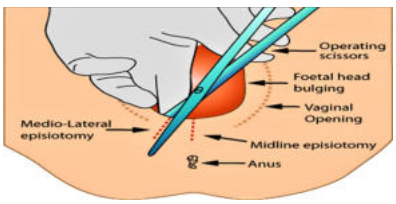
KEYWORDS : Episiotomy, primigravida, perineal, kegel's exercise, sitz bath

INTRODUCTION

The wonderful sensation of being a new mom has just begun to sink in, but now your body has to recover fully after the delivery. It is important to know the basics of proper wound care of an episiotomy wound. Episiotomy is the second commonest surgical procedure in obstetric practice after the cutting of the umbilical cord at delivery.[1] It can be defined as a surgical incision made at the perineum to widen the introitus and facilitate delivery.[2] The World Health Organization (WHO) recommends an episiotomy rate of 10% for normal deliveries.[3] Although, the frequency of performing an episiotomy is decreasing, 30% to 50% of women may still receive episiotomy.[4]

The rate of episiotomy was found to be 93.3% in primipara women and 30.2% in multipara women. Episiotomy is one of the most commonly used procedures for women. Deliveries are performed in tertiary care public hospitals in India with an overall episiotomy rate of around 70%. Perineal trauma during vaginal delivery is very common occurring in about 40% of primigravida and 20% of multiparous women.[5]

Episiotomy, a common procedure in obstetric care.[6] (Episiotomy, also known as perineotomy, is a surgical incision of the perineum and the posterior vaginal wall) Episiotomy is a surgically planned incision on the perineum and the posterior vaginal wall during the second stage of labour to enlarge the vaginal introits so as to facilitate easy and safe delivery of the fetus, to minimize the overstretching and rupture of perineal muscles and fascia and to reduce the stress and strain on the fetal head.[6] Episiotomy also helpful in reduction in duration of second stage of labor. The first performance of episiotomy was done in 1742, when perineal incisions were used to facilitate deliveries.[7]



Pritchard, Mac- Donald and Gant 1985, described that episiotomy reduces the incidence of cystocele, rectocele and stress incontinence. In cases where an episiotomy is indicated, a medio lateral incision may be preferable to a median (mid-line) incision as the latter is associated with a higher risk of injury to the anal sphincter and the rectum.[8]

NEED FOR PERINEOTOMY

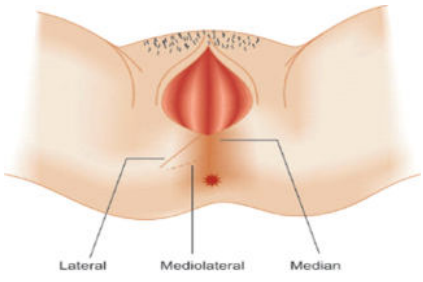
Not all the women need an episiotomy. Stretching the tissues naturally may help reduce your need for it. Without an episiotomy, your perineal tissues may tear. This can be harder to repair.

Episiotomy may be advise in these situations:

- The baby does not have enough oxygen (fetal distress)
- Complicated birth, such as when the baby is positioned bottom or feet first (breech) or when the baby's shoulders are trapped (shoulder dystocia)
- Long pushing stage of labor
- Forceps or vacuum delivery
- Large baby
- Preterm baby

Types of episiotomy

- Mid line episiotomy
- Mediolateral episiotomy
- J shaped episiotomy
- Lateral episiotomy.[9]



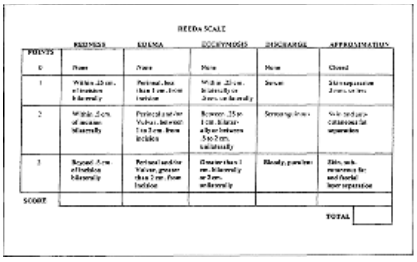
PERINEOTOMY CARE AND HEALING.

- Episiotomy wound care starts immediately after suturing the wound in order to reduce pain and faster the wound healing.
- There are some general treatments for perineal care such as cold packs and ice packs applied to perineum for the first 24 hours to decrease edema and pain.
- Kegal's exercise - Squeeze the perineal muscles as if you were trying to stop the flow of urine. Hold for 5 to 10 seconds and then relax. Do this exercise 10 times a day to regain muscle strength and it speeds up the wound healing process.
- Analgesic drugs[ibuprofen]may be given when required.
- Infrared heat is provided to relieve pain.
- Warm or cold shallow baths (sitz baths) may ease soreness and speed healing.
- The dressing is done by swabbing with cotton swabs soaked in antiseptic solution followed by application of antiseptic powder or ointment (Neosporin).
- Keep the incision clean and dry using the method your healthcare provider recommends. This is important after urination and bowel movements.
- Daily washing of perineum with warm water and mild soap to be encouraged.
- If bowel movements are painful, stool softeners may be helpful.
- Do not douche, use tampons, or have sex until your healthcare provider's advice.
- No strenuous activity or heavy lifting.
- The mother is allowed to move out of the bed after 24 hours. Prior to that, she is allowed to roll over on to her side or even to sit but only with thighs apposed.
- Mother should be taught to wipe the perineum from front to back to avoid contamination from the anal region.
- Explain/encourage practices such as changing the perineal pad after each voiding and bowel movement or at least four times a day,
- Removing the pad from front to back and hand washing to decrease the risk of infection and promote wound healing of episiotomy or repaired lacerations.[10]

Healing process assessment scale

REEDA SCALE

Secondary outcome measure used was REEDA scale for assessing the healing process .REEDA scale has a categorical score [0-3].That measure 5 components associated with the healing process .Each item is related on a scale of 0 - 3 and score may range from 0-15 . The lesser score indicate better healing. R- Redness E- Edema. E- Ecchymosis. D- Discharge. A- Approximation of wound edge.



A study was conducted on : Episiotomy related morbidity measured by redness, edema, ecchymosis, discharge and apposition scale and numerical pain scale among primiparous women in Mulago National Referral Hospital, Kampala, Uganda. A prospective cohort study was conducted by recruiting primiparous women systematically on their first postnatal day and categorizing them as an episiotomy and no episiotomy group. NPS and REEDA scale were taken at baseline and 2 weeks postpartum. The mean total REEDA score for primiparous women among the episiotomy group was significantly higher both on day 1 and day 14 with p-values <0.0001 and <0.0001 respectively as well as the day 14 mean NPS p-value 0.001.11

RISKS ASSOCIATED WITH PERINEOTOMY

Some possible risks of an episiotomy may include:

- Bleeding
- Tearing into the rectal tissues and anal sphincter muscle which controls the passing of stool
- Swelling
- Infection
- Collection of blood in the perineal tissues
- Dyspareunia.

CONCLUSION

Episiotomy is the second commonest surgical procedure in obstetric practice after the cutting of the umbilical cord at delivery. It can be defined as a surgical incision made at the perineum to widen the introitus and facilitate delivery. The rate of episiotomy was found to be 93.3% in primipara women and 30.2% in multipara women. So more research study is needed in the periniotomy care to enhance the awareness and knowledge among the postnatal mothers.

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CONFLICT OF INTEREST

Have no conflict of interest relevant to this article.

ETHICAL CLEARENCE

Not required

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ROAD ACCIDENTS SAFETY AMONG TEENAGERS

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ABSTRACT

Speed is a contributing factor in around one-third of all fatal road traffic crashes in high-income countries, and up to half in low- and middle-income countries. Long, straight roads which pass by schools, residences and businesses and which facilitate travel at high-speed place children at significant risk. A major risk to children as pedestrians, cyclists and passengers in vehicles are people who drink and drive. Consuming alcohol before driving increases not only the chance of a road traffic crash occurring, but also the likelihood that death or serious injury will result. For children, wearing a helmet is the single most effective strategy for reducing the risk of injury to the head while riding bicycles or motorcycles. For children who are occupants of a vehicle, a range of restraints is available to protect them. These include infant car seats, child car seats, booster seats and seat-belts, and their use depends on the age, weight and height of the child.

Key Words: *road safety, injury, traffic crash.*

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INTRODUCTION

A road traffic accident is the 8th leading cause of death among all age groups globally and the top leading cause of death for children and young adults aged 5 to 29 years, signalling a need for a shift in the current child health agenda, which has largely neglected road safety. As progress is made in the prevention and control of infectious diseases, the relative contribution of deaths from non-communicable diseases and injuries increases. **(WHO 2015 and 2018)**

The UN General Assembly declared 2011-2020 as the stabilize and reduce the increasing trend in road traffic fatalities. According to the Youth and Road Safety, Geneva, WHO (2007), Road safety is defined as a measure to reduce the harm resulting from crashes of road vehicles, to convey information to road users, to enhance their knowledge about road safety issues, influence their behaviour on the road and prepare them for new safety measures. A ccombination of physical and developmental immaturity among children, and inexperience and youth-related lifestyles further increase the risk of young road users, particularly males to road traffic collisions. Improving the knowledge and practice gap among the people in the community can lead to the drastic reduction in road traffic accidents. **(WHO 2019)**

CAUSES

Globally, around 186 300 children under 18 years die from road traffic crashes annually, and road traffic injuries are the leading killer of children aged 15-17 years worldwide. Two times as many boys as girls die in road traffic crashes. In addition, rates of road traffic death among children are 3 times higher in low- and middle-income countries than in high-income countries.

Road traffic injuries can be prevented. While no single measure adequately addresses the vast range of risks to children on the road, the ten strategies below are those which are best known - especially when implemented as a package - to keep children safe on the road.

- **Controlling speed**

  Speed is a contributing factor in around one-third of all fatal road traffic crashes in high-income countries, and up to half in low- and middle-income countries. Long, straight roads which pass by schools, residences and businesses and which facilitate travel at high-speed place children at significant risk.

  The following strategies can reduce speed:
  - setting and enforcing speed limits appropriate to the function of each road;
  - setting and enforcing a maximum speed limit of 30 kilometres per hour on roads with high concentrations of pedestrians;
  - enforcing speed limits through the use of automatic speed cameras;
  - building or modifying roads to include features that limit speed such as traffic lights, roundabouts, and speed humps.
- **Reducing drinking and driving**

  A major risk to children as pedestrians, cyclists and passengers in vehicles are people who drink and drive. Consuming alcohol before driving increases not only the chance of a road traffic crash occurring, but also the likelihood that death or serious injury will result. The risk of a road traffic crash begins to rise significantly when a driver has a blood alcohol concentration (BAC) of around 0.04 g/dl.
- **The following strategies can reduce drinking and driving:**
  - setting and enforcing BAC limits of 0.05 g/dl or less for all drivers, and lower BAC limits of 0.02 g/dl or less for young drivers;
  - enforcing drinking and driving laws through sobriety check points and random breath testing;
  - restricting the sale of alcohol by legislating a minimum purchase age and regulating the types of establishments which sell alcohol and their hours of operation;
  - limiting the marketing of alcohol to children.
- **Using helmets for bicyclists and motorcyclists**

  For children, wearing a helmet is the single most effective strategy for reducing the risk of injury to the head while riding bicycles or motorcycles. For cyclists of all ages, the appropriate use of a helmet decreases the risk of a head injury by 69%, while for motorcyclists of all ages, the appropriate use of a helmet reduces the risk of death by 40% and the risk of serious head injury by more than 70%. The following strategies can ensure the use of helmets: mandating and enforcing motorcycle helmet laws that stipulate the type and fit of motorcycle helmets by age group;

- **Restraining children in vehicles**
  For children who are occupants of a vehicle, a range of restraints is available to protect them. These include infant car seats, child car seats, booster seats and seat-belts, and their use depends on the age, weight and height of the child. As compared to using seat-belts alone, booster seats are estimated to reduce by 59% the risk of children aged four to seven years sustaining significant injuries during a road traffic crash. The following strategies can increase the uptake of child restraints and their appropriate use:
  - mandating and enforcing child restraint laws for all private vehicles;
  - putting in place internationally recognized manufacturing standards for child restraints;
  - ensuring the availability and affordability of child restraints for those who need them;
  - obliging vehicle manufacturers to have plug-in attachments for car seats in all private vehicles, such as ISOFIX anchorage systems which fix child restraints in place;
  - promoting child restraint loan schemes and educating families on how to use restraints.
- **Improving children's ability to see and be seen**
  Seeing and being seen are fundamental prerequisites for the safety of all people who travel the roads, but are particularly important for children due to their particular vulnerability.
  The following strategies can be used to improve visibility:
  - wearing white or light-coloured clothing;
  - using retro-reflective strips on clothing or articles such as backpacks;
- **Enhancing road infrastructure**
  Historically, roads have been built primarily for the benefit of motorized transport, with little consideration of the needs of the communities they pass through. Building new and modifying existing road infrastructure with a concern for safety would enhance the liability of these communities and reduce risks to children from road traffic crashes.
  Strategies to enhance road infrastructure include:
  - implementing physical measures such as traffic lights, roundabouts, speed humps, cross walks, over passes, median strips, and street lighting on busy roads;
  - separating different types of traffic and road users through mechanisms such as raised pavements for pedestrians, dedicated lanes for pedestrians and cyclists, and median barriers to separate vehicle traffic moving in different directions;
  - creating car-free zones to enhance the safety of pedestrians;
- **Adapting vehicle design**
  Optimal vehicle designs and standards can contribute to the safety of children both inside and outside a vehicle, including those on bicycles and motorcycles. Many vehicle safety measures protect all road users, but some are specific to children or have the potential to reduce risks for children more than adults. These strategies include: mandating the installation of energy-absorbing crumple zones to protect passengers inside a vehicle in the event of a road traffic crash; redesigning vehicle fronts to make them more “pedestrian friendly”.

REASONS OF ROAD ACCIDENTS

There can be several reasons for road accidents as it is mentioned below.

1. Distracted Driving:- One must not be distracted while as nowadays mobile phones, internet connectivity, and the like. Eating food, changing the radio station or track on their phone, texting, being on a call, looking for directions on Google Maps, making videos or taking photos, are all designed to take their attention away from the roads.
2. Driving under the influence of intoxicants: Intoxicants such as marijuana, hash, and the commonly available ‘bhaang’, can impair your teenager’s ability to think and react quickly, putting themselves and other passengers at risk.
3. Tired Driving: With all the playing, socialising, and running errands, they do get tired. And driving in a tired state is not ideal, given that it slows down one’s response times and reduces alertness – a combination that can prove fatal when driving.
4. Not following traffic rules: Speeding up the vehicle and not following the traffic rules is the leading cause of road accidents. Therefore, it makes sense to inform your teen about the dangers of speeding – even if it’s due to peer-pressure, or under less-than-ideal weather conditions.

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Spirometry: Best friend for healthy lungs

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Abstract: A spirometer is a specialized device to do lung function tests and find an obstructive and destructive pattern of ventilation, it has different types and methods of measurements; it can be done anywhere and by anybody with the proper training from professionals by following general protocols. These techniques are useful for patients to achieve normal FVC & FEV1, the normal spirometer value is varied accordingly to person, age, height, physical, and sex characteristics, these aspects play a major role to set a goal for patients and the results are measured by the column of the spirometer with grid and digits the numbers are usually expressed in millimeter to measures the total volume (TV) of a person's breaths. The amount of air inhaled into the lungs during inspiration is measured by an incentive spirometer. A cylinder within an incentive spirometer rises when the user inhales, measuring the amount of air that is inspired. The incentive spirometry device is frequently used in physical, speech, and respiratory therapy because it motivates the patient to take slow, deep breaths by providing visual information. When using a spirometer, it's vital to take slow, deep breaths in order to simulate the stretching and opening of the airways when chewing or breathing.

Keywords: spirometer; spirometry; FVC- forced vital capacity; FEV1- forced expiratory volume in the first second; TV- total volume.

I. INTRODUCTION

Spirometry is a device given for basic lung function tests that helps to record the air that is expired and inspired. it has three basic related measurements: volume, time, and flow. Spirometry is objective, non-invasive, sensitive to early change, and reproducible. With the availability of a portable spirometer can be performed anywhere and by anybody, with the right training, it is performed to detect the presence or absence of lung disease, quantify lung impairment, monitor the effects of occupational/environmental exposures, and determine the effects of medications. [1]

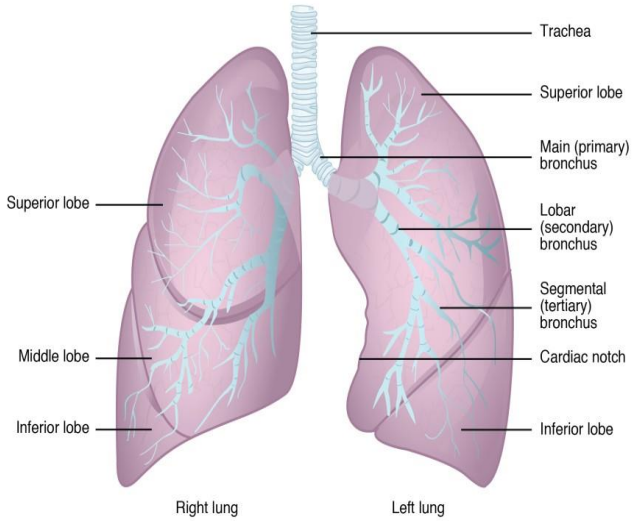
The incentive spirometer measures the inhaling volume in order to evaluate the patient's inspiratory effort through visual feedback. Due to its low cost, ease of use, and lack of known side effects, the incentive spirometer can be a useful tool in rehabilitation. Once a patient has mastered its use, it is easy to train and does not need help. Additionally, the visual cues promote patient compliance.

It has been demonstrated that the incentive spirometer can help enhance sputum expectoration, maintain or increase inhaled lung volume, and avoid lung infection after surgery. In spite of conflicting evidence about incentive spirometry's efficacy for treating chronic illnesses, strengthening the inspiratory muscle is crucial for minimizing postoperative pulmonary problems. Following surgery, using an incentive spirometer can assist maintain the lungs' structural integrity and keep the airways clear. Deep breathing helps to free up any collapsed lung passages and aids the circulation of secretions. In particular, while recovering from surgery, inspiratory muscle training stretches and trains the lungs, keeping them active. [2]

II. ANATOMY AND PHYSIOLOGY

Lungs support life by supplying oxygen for metabolism and removing the by-product carbon dioxide. Air will move via the oropharynx to the trachea, which is a cartilage-covered membranous tube that splits at the carina into two bronchi at the level of C6. After passing through the trachea, air enters the right and left bronchi, which split to form millions of terminal bronchioles that terminate in the alveoli. The alveoli and surrounding arteries serve as a surface for gas exchange. [3] (Figure:1) [4]

(Figure:1. Anatomy of the lungs)



(Figure:1. Anatomy of the lungs)

III. DEFINITION

A spirometer is a device that measures the amount of air inspired and expired from the lungs. A spirometer measures ventilation, the movements of air in and out of the lungs. A spirogram identifies two different types of abnormal ventilation patterns obstructive and destructive, there are different types of spirometers that use several different methods of measurement (pressure transducer, ultrasonic, water gauge). [5]

IV. ABOUT THE INCENTIVE SPIROMETER

A spirometer device will expand the lungs by helping them to breathe more deeply and fully. It measures how much air people can breathe into their lungs.

The parts of the incentive spirometer are labeled in Figure 2.

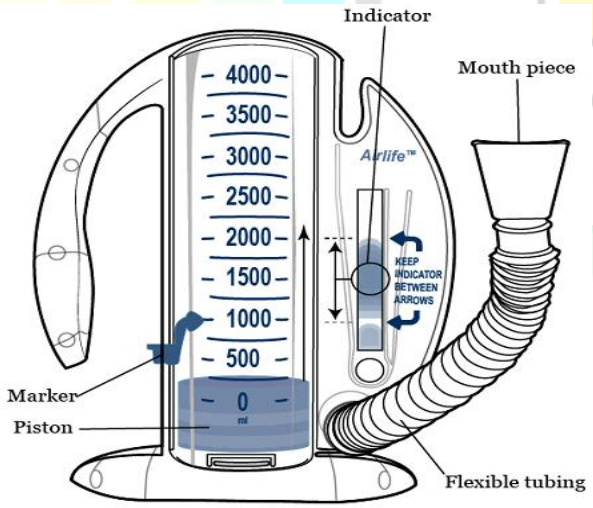


Figure:2. Incentive Spirometer

Use an incentive spirometer after the surgery and do deep breathing and coughing exercises. This will help keep lungs active throughout patient recovery and prevent complications such as pneumonia and active respiratory infection (such as atelectasis, bronchitis, or COVID-19). [6]

The benefits of spirometry are designed to encourage long, slow, deep breathing. Incentive spirometry encourages patients to inhale slowly and deeply in order to simulate spontaneous sighs. Utilizing equipment that shows patients visually when the required flow or volume has been reached, incentive spirometry is conducted. The foundation of incentive spirometry entails having the patient take a sustained, maximal inspiration (SMI). A gradual, deep inspiration from the functional residual capacity up to the complete lung capacity is called an SMI, which is followed by a breath hold of about five seconds.

V. TYPES OF INCENTIVE SPIROMETER

- Flow-oriented incentive spirometer (Triflow Device) - Has three chambers with one ball in each chamber. Capacity up to 1200ml.
- Volume-oriented incentive spirometer - Has a one-way valve with a 4000 ml capacity. According to recent research, using this kind of spirometer enhances diaphragmatic function and needs less exertion to breathe. When compared to Triflow, using this device improves pulmonary function more. [7]
- Portable Air-Smart Spirometer - The Air-Smart Spirometer is the first portable device accepted by the European Community (EC) that performs spirometric measurements by a turbine mechanism and displays the results on a smartphone or a tablet.

Figuer:3. Air smart spirometer
after 6 seconds of exhalation, the chronometer turns green

The Air-Smart Spirometer is a simple and very precise instrument for detecting obstructive airway diseases. It is easy to use, which could make it especially useful for non-specialized care and in other areas. [8]

VI. INDICATIONS

Spirometry is frequently used to identify and diagnose lung illnesses such as:

- Asthma
- Chronic obstructive respiratory disease (COPD)
- Cystic fibrosis
- Pulmonary fibrosis

Individuals with these illnesses will also require regular follow-up testing to assess lung function and disease development. Spirometry can also be used to assess the efficacy of drugs used to treat these disorders, as well as any changes that occur over time. spirometry can also be used to determine an individual's baseline lung function, giving a baseline against which to compare future findings and identify any changes that occur over time.

This is especially useful for people who work in a setting with a high occupational risk of lung illness. This includes jobs where workers are exposed to irritants such as dust and harmful particles in the air, which can lead to a loss of lung function.

Spirometry examinations can also aid in the study of some respiratory complaints, such as chronic coughing or shortness of breath, often known as dyspnea. Due to the higher risk of lung illnesses in this patient population, this diagnostic test may also be indicated for heavy smokers over the age of 35.

Prior to undergoing some surgical operations, spirometry is frequently included in pre-surgical examinations to assess the risk of pulmonary problems. [9]

VII. CONTRAINDICATIONS

Spirometry has been shown to be an accessible tool for assessing lung function. However, it may not be appropriate for every patient, and in certain circumstances, it may be completely or partially contraindicated.

7.1 Absolute Limitations

- Instability of the hemodynamic system
- Acute coronary syndrome or recent heart attack
- A recent pneumothorax, a respiratory infection, or a pulmonary embolism
- A developing or massive (>6 cm) thoracic or abdominal aortic aneurysm
- Acute onset hemoptysis
- Intracranial hypertension (IH)
- Detachment of the retina

7.2 Contraindications in Relation

- Patients who cannot be educated adequately and are at danger of using the device incorrectly, such as youngsters and dementia patients
- Conditions that make holding the mouthpiece difficult, such as facial pain
- Recent thoracic, abdominal, brain, eye, ear, nose, or throat surgery
- Hypertensive emergency. [10]

VIII. PROPER USE OF AN INTENSIVE SPIROMETER

The doctor, surgeon, or nurse will likely give specific instructions on using a spirometer. The following is the general protocol:

1. Therapist demonstrates using a separate device and provides an information sheet regarding technique, prescription of use, and cleaning advice based on the manufacturer's instructions.
2. sit up on the edge of the bed or chair.
3. Hold the spirometer in an upright position at eye level.
4. Breathe normally.
5. Place the spirometer mouthpiece in the mouth and close your lips tightly around it.
6. Breath in through the mouth as slowly and deeply as much as possible, causing the piston or balls to rise toward the top of the chamber.
7. Hold your breath for 3–5 seconds or as long as possible.
8. Remove the mouthpiece from the mouth.
9. Breathe out normally. The piston or ball will return to the bottom of the chamber.
10. Rest for a few seconds, then repeat the steps 10 or more times.
11. After each set of 10 deep breaths, cough a few times it helps to loosen or clear any mucus from the lungs. [11]

IX. TECHNIQUES

There are a number of different techniques for performing spirometry.

- Before performing a forced expiration, a tidal (normal) breath may be taken first, followed by a deep breath while using the mouthpiece, followed by a further quick, full inspiration.
- Alternatively, a deep breath may be taken followed by the mouth being placed tightly around the mouthpiece before performing a full exhalation.
- The patient may be asked to empty their lungs completely, followed by a quick full inspiration, and full expiration.

9.1 The latter technique is useful in patients who achieve large inspiration after expiration.

- For FVC and FEV1, patients take the largest deep breath possible and exhale as hard and fast as possible and continue until no more air is left.
- PEF is obtained from the FEV_1 and FVC maneuvers.
- For VC, patients take as large, deep breaths as possible and blow steadily for as long as possible until no more air is left. Nose clips are essential for VC because of low flow and leakage of air.
- The IVC maneuver is performed by exhaling all the way to the end of the FVC/VC (depending on the type of equipment used) and then taking a deep, rapid breath back. [12]

X. SPIROMETER NORMAL RANGE

A specific person's FVC, FEV1, and FEV1/FVC ratio are the three main spirometry parameters that are compared to reference values. The reference value informs the clinician of the values that would be predicted for a patient of the same sex, age, and height based on healthy persons with normal lung function. On your spirometry report, search for the column labeled "reference" or "predicted" value to find the reference value. (See the following table.) [13]

Percentage of predicted FEV1 value	Result
80% or greater	**Normal**
70%–79%	**Mildly abnormal**
60%–69%	**Moderately abnormal**
50%–59%	**Moderate to severely abnormal**
35%–49%	**Severely abnormal**
less than 35%	**Very severely abnormal**

Results from spirometry must be compared to the reference value in order to be properly interpreted. The results are regarded as normal if both the FVC and the FEV1 are within 80% of the reference value. The FEV1/FVC ratio should be 70% in healthy individuals (and 65% in those over 65). A lower measured value compared to the reference value indicates a more serious lung abnormality. [14]

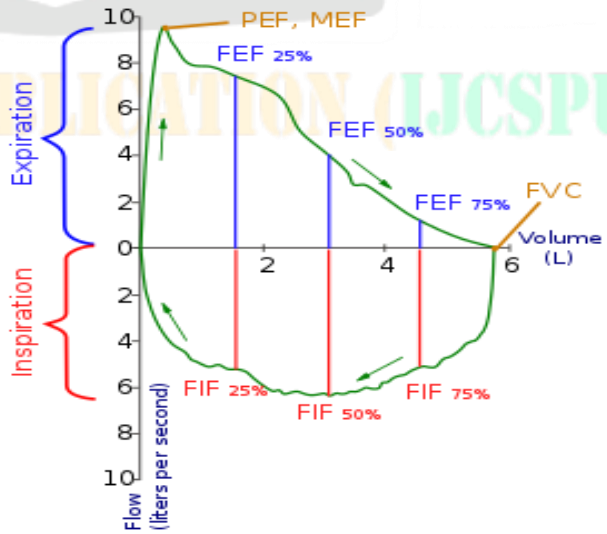


Figure:4

Flow-Volume loop showing successful FVC maneuver. Positive values represent expiration; negative values represent inspiration. At the start of the test both flow and volume are equal to zero (representing the volume in the spirometer rather than the lung). The trace moves clockwise for expiration followed by inspiration. After the starting point, the curve rapidly mounts to a peak (the peak expiratory flow). (Note the FEV1 value is arbitrary in this graph and just shown for illustrative purposes; these values must be calculated as part of the procedure).

XI. HOW ARE RESULTS MEASURED

The main column of the incentive spirometer has a grid with numbers. These numbers are usually expressed in millimeters and measure the total volume of a person's breath.

A spirometer has a small chamber that measures the patient's breathing rate. This chamber consists of a ball or piston that flexes up and down as the breathing rate changes.

Breathing too fast will cause the ball to go to the top of the chamber and breathing too slowly will cause it to go down. [15]

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THE COPD AND DRAWBACKS OF NON-INVASIVE VENTILATION IN THE TREATMENT OF COPD PATIENTS

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Abstract: Chronic obstructive pulmonary disease (COPD) is still a major source of morbidity and mortality around the world. Patients with COPD and respiratory failure, whether acute or chronic, have a worse prognosis than those without. Non-invasive ventilation (NIV) has been demonstrated to be a valuable tool in both acute hospital and chronic home care settings. When compared to standard therapy, NIV has been well established as the gold standard therapy for acute decompensated respiratory failure aggravating an acute exacerbation of COPD, with lower death and intubation rates. However, NIV is increasingly being employed in various clinical scenarios, such as weaning off invasive ventilation and palliating symptoms in patients who are not candidates for invasive ventilation. The inconclusive evidence for the use of NIV in persistent hypercapnic respiratory failure aggravating COPD has lately been questioned, with new findings showing a need for treatment in certain patient subgroups. Finally, the study will explore the emerging function of high-flow humidified therapy in some clinical situations to supplement or replace NIV.[1] Non-invasive positive pressure ventilation (NIV) has a contentious role in severe chronic obstructive pulmonary disease (COPD). Over the last two decades, data from Europe, primarily, have begun to clarify the clinical characteristics of individuals likely to react, the role of high-intensity NIV, and the potential ideal timing for commencing therapy. However, these ideas have not been proven in the context of the United States healthcare delivery system. The difficulties of doing in-hospital titrations, as well as a complex reimbursement system, limit the use of NIV in severe COPD in the United States. These systematic complications, together with a still-developing clinical trial database on the most effective means of delivering NIV, have resulted in continuous confusion over when treatment with NIV is actually suitable in stable severe COPD. In this review, we offer an evaluation algorithm.[2]

Keywords: Non-invasive ventilation (NIV), chronic obstructive pulmonary disease (COPD), acute respiratory failure, chronic respiratory failure

I. INTRODUCTION

1.1 COPD (chronic obstructive pulmonary disease)?

COPD is a catch-all term for a variety of progressive lung illnesses. COPD can be caused by chronic bronchitis or emphysema. A COPD diagnosis indicates that the patient has one of these lung-damaging diseases or symptoms of both. COPD can progress gradually, making breathing more difficult over time. [Figure:1][3]

1.2 Chronic bronchitis

Chronic bronchitis is characterised by bronchial tube inflammation (swelling) and irritation. These are the airways that transport air to and from the lungs' air sacs. Mucus accumulates as a result of the irritation of the tubes. The mucus and thickening of the tubes make it more difficult for the lungs to transfer oxygen into and carbon dioxide out of the human body.[4]

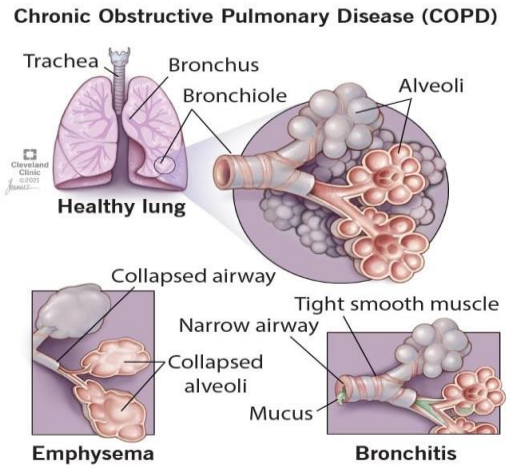

Figure:1

1.3 Chronic bronchitis

Chronic bronchitis is characterized by bronchial tube inflammation (swelling) and irritation. These are the airways that transport air to and from the lungs' air sacs. The mucus accumulates as a result of the irritation of the tubes. The mucus and thickening of the tubes make it more difficult for the lungs to transfer oxygen into and carbon dioxide out of the human body.[4]

The stages are:

• **Stage 1** emphysema is the mildest stage. Your lungs work at least 80% as well as the healthy lungs of someone your age, height, and gender.

• **Stage 2** emphysema is mild. Your lungs function between 50% and 79% as well as the healthy lungs of someone your age, height, and gender.

• **Stage 3** is the most severe form of emphysema. Your lungs function between 30% and 49% as well as the healthy lungs of someone your age, height, and gender.

• **Stage 4.** This is a severe case of emphysema. Your lungs perform less than 30% as well as the healthy lungs of someone your age, height, and gender.[6]

II. CAUSES

COPD develops gradually over time, often resulting from a combination of risk factors:

- Tobacco exposure from active smoking or passive exposure to second-hand smoke.
- Occupational exposure to dust, fumes, or chemicals.
- Indoor air pollution: biomass fuel (wood, animal dung, crop residue) or coal is frequently used for cooking and heating in low- and middle-income countries with high levels of smoke exposure.
- Early life events such as poor growth in utero, prematurity, and frequent or severe respiratory infections in childhood prevent maximum lung growth.
- Asthma in childhood.
- A rare genetic condition called alpha-1 antitrypsin deficiency can cause COPD at a young age.[7]

2.1 AAT deficiency

AAT (alpha-1 antitrypsin deficiency) is a rare, hereditary condition that can result in emphysema. Alpha-1 antitrypsin is an enzyme that aids in the protection of your lungs from the harmful consequences of inflammation. AAT insufficiency causes insufficient production of alpha-1 antitrypsin. Exposure to irritating substances such as smoke and dust increases the likelihood of lung injury. COPD caused by alpha-1 antitrypsin deficiency cannot be distinguished from ordinary COPD. As a result, all persons with COPD should be tested for AAT insufficiency using a blood test.[8]

III. SYMPTOMS

3.1 Chronic obstructive pulmonary disease (COPD) includes one or more of three separate diseases:

- Emphysema
- Chronic bronchitis
- Chronic obstructive asthma

3.2 They all make breathing more difficult and worsen over time. COPD has three major symptoms:

- Shortness of breath
- A cough that doesn't go away
- Coughing up thick, often colored mucus

3.3 Early Symptoms

In the early stages of chronic obstructive pulmonary disease (COPD), many people may not experience any symptoms. This could be because there aren't any in some circumstances. In others, though, patients may notice modest early symptoms if they pay carefully.

Patients, for example, may discover that they are unable to perform daily duties such as walking up the stairs, gardening, or bringing groceries inside as effortlessly as they formerly did. This could be due to increasing weight, ceasing to exercise, or contracting the illness. However, if there is no evident cause and the symptoms persist, it is time to see your doctor for an evaluation.

They can do a series of tests on breathing (spirometry) that could help rule out or diagnose COPD.

3.4 Other Symptoms

Symptoms usually worsen over time, and patients, particularly smokers, may already have significant lung damage before they even realize it. If patients exhibit any of these additional COPD symptoms, they should schedule a consultation.

- Wheezing
- Blue lips or fingernails
- Fatigue (extreme tiredness) most or all of the time
- Frequent colds
- Losing weight without trying
- Swollen feet, ankles, or legs
- Having to clear your throat a lot
- Chest tightness.[9]

3.5 Sputum (mucus) changes

Examples include:

- Changes in colour.
- Presence of blood.
- alterations in thickness or quantity. Patients cough up more mucus than is normally present or more than they can normally expel.
- Odor.

IV. HOW IS COPD DIAGNOSED?

4.1 Medical history

To diagnose COPD, the provider will ask questions about:

- History of smoking.
- Long-term exposure to dust or air pollutants.
- Family history of COPD.
- Short of breath with exercise.
- Coughing or wheezing for a long time.
- Cough up phlegm.[10]

4.2 Physical examination

Physical examinations are very sensitive and specific for serious illness. In cases of mild to moderate disorders, the symptoms are typically difficult to spot.

- **Appearance of the Patient**

- Cyanosis
- Tachypnea
- Use of auxiliary respiratory muscles indicates respiratory discomfort. It is clear from the illustration of the lower intercostal areas that the Hoover sign presents a dilemma (known as the Hoover sign)
- Elevated jugular venous pulse (JVP)
- Peripheral edema can be observed.

- **Lungs: -**

Inspection
• Hyperinflation (barrel chest)
Percussion
• Hyper resonance
Auscultation
• Prolonged expiration; wheezing • Diffusely decreased breath sound • Additional sounds - coarse crackles with inspiration.[11]

4.3 Spirometry

Spirometry is the most used and reliable approach for identifying COPD. The pulmonary function test, or PFT, is another name for it. This quick, painless test evaluates lung capacity and function. Patients will exhale as forcefully as they can into a tube attached to the spirometer, a tiny machine, to perform this test. [Figure:2][12]

Figure:2

4.4 Bronchodilator reversibility test

Spirometry and the administration of a bronchodilator—a medication that helps open up airways—are both used in this test. Patients will do a typical spirometry test before this test to establish a baseline reading of how well their lungs are functioning. Also will take a dose of bronchodilator medication and repeat the spirometry test after around 15 minutes.
bronchodilator medication.
E.g.: Levalbuterol, Aclidinium, Arformoterol.

4.5 Blood tests

Measurements of the blood's oxygen and carbon dioxide levels will be made during an arterial blood gas test. This is one sign of how efficiently the lungs are operating. This assessment can reveal the extent of COPD and whether or not a patient needs oxygen therapy.

4.6 Genetic testing

The healthcare professional could examine the alpha-1 antitrypsin levels (AAT). This protein aids in preventing lung inflammation brought on by irritants like smoking and pollutants. The liver produces it, and the circulation subsequently receives it.

Alpha-1 antitrypsin deficiency is a disorder that affects people with low levels, and they frequently experience early-onset COPD. can determine if they are AAT deficient by genetic testing.

4.7 Chest X-ray or CT scan

An X-ray technique called a CT scan produces a picture that is more accurate than an ordinary X-ray. Any form of X-ray that the medical professional choose will provide a visual of the internal organs of the chest, such as the heart, lungs, and blood vessels. [Figure:3][13]

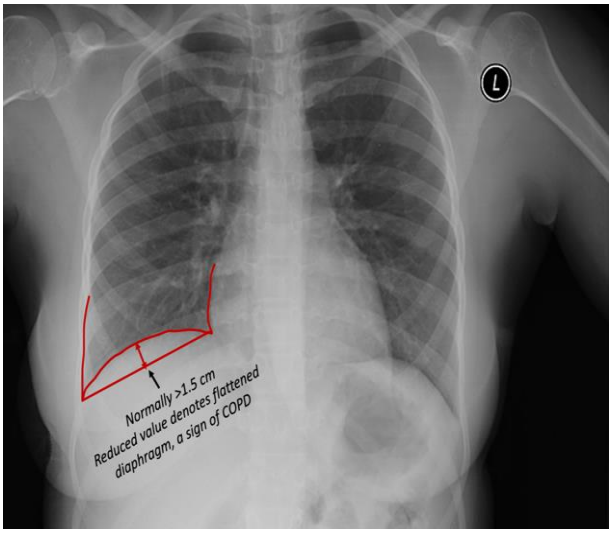

Figure: 3

4.8 Sputum examination

Finding the root of the patient's breathing problems and possibly even some lung malignancies can both be accomplished through sputum analysis. It is also possible to detect and treat any bacterial infections they may have.

4.9 Electrocardiogram (ECG or EKG)

To identify whether a heart condition rather than a lung issue is to blame for the shortness of breath, an electrocardiogram (ECG or EKG) is performed. But over time, the breathing issues brought on by COPD can result in cardiac issues such irregular heart rhythms, heart failure, and heart attacks.

An EKG can identify a cardiac rhythm problem by determining the electrical activity of the heart.[14]

V. WARNING SIGNS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Signs of COPD includes:

- Shortness of breath, especially during physical activities.
- Wheezing.
- Chest tightness.
- A chronic cough that may produce mucus (sputum) that may be clear, white, yellow or greenish.
- Frequent respiratory infections.
- Lack of energy.
- Unintended weight loss.[15]

VI. LUNG THERAPIES

The goal of treating COPD is to reduce symptoms like coughing and breathing issues while also preventing respiratory infections. The supplier might suggest:

6.1 Bronchodilators: These drugs open up the airways. Patients breathe more easily after inhaling a bronchodilator-containing mist.

6.2 Anti-inflammatory medications: To reduce lung inflammation, the patient either inhales steroids or takes them as a tablet.

6.3 Supplemental oxygen: They could require a portable oxygen tank to raise their blood oxygen levels if they have hypoxia.

6.4 Antibiotics: They are more vulnerable to lung infections due to their COPD, which can weaken and further harm their lungs. in order to stop bacterial infection, people might need to take antibiotics.

6.5 Vaccinations: Those who suffer from COPD, and respiratory infections are more hazardous. Immunizations are especially crucial for preventing the flu and pneumonia.

6.6 Rehabilitation: Effective breathing techniques are taught in rehabilitation programs to reduce shortness of breath and conditioning. The amount they can do with their lungs can rise with continued fitness.

6.7 Anticholinergics: These medications loosen the muscles that constrict around the airways, which aids in clearing mucus from the lungs. Muscles that are relaxed allow for greater airflow. The mucus can be coughed out more easily when the airways are open because it can travel around more freely. Unlike fast-acting bronchodilators, anticholinergics have a different and more gradual mode of action.

6.8 Leukotriene modifiers: These drugs work by inhibiting leukotrienes, bodily substances that naturally arise and constrict airways and produce fluid and mucus. Leukotriene modifiers reduce these reactions and block the chemicals, which helps to increase airflow and lessen discomfort in certain people.

6.9 Expectorants: These medications help people cough up mucus more readily by thinning it in the airways. They should drink roughly 8 ounces of water while taking these drugs.

6.10 Antihistamines: These drugs treat congestion, watery eyes, and sneezing. Antihistamines can dry down the air passages, which makes breathing challenging and makes it challenging to cough up extra mucus, despite the fact that they are helpful in alleviating these symptoms. To lessen nausea, use these drugs with food.

6.11 Antivirals: The doctor may recommend these to treat or prevent viral diseases, most commonly to treat or prevent influenza ("the flu"). People with COPD are particularly vulnerable to influenza.[16]

VII. COMPLICATIONS

COPD can lead to numerous consequences. It can be easier to remain on top of their symptoms and get treatment as soon as they appear if you are aware of them.

7.1 Recurring Respiratory Infections

Despite their ability to alert people and the healthcare provider to COPD, chronic respiratory infections can worsen lung damage.

7.2 Anxiety and Depression

The psychological repercussions of COPD, in particular anxiety and depression, are frequently disregarded. These symptoms are crucial due to their impact on overall quality of life as well as the increased risk of COPD exacerbation and general decline in health that they bring with them.

7.3 Heart Disease:

The risk of heart disease and heart attack may increase as a result of COPD. Quitting smoking may assist because it can be a contributing factor in this.

7.4 Pulmonary Hypertension:

High blood pressure in the arteries in your lungs, called pulmonary hypertension, is a common complication of COPD, especially in the advanced stages of the disease.

7.5 Lung Cancer:

COPD is a strong independent risk factor for lung cancer, meaning that it raises your risk even if you have never smoked

7.6 Respiratory Failure:

Respiratory failure can be a complication of COPD. It occurs when your lungs fail to do their job passing oxygen into your bloodstream and removing carbon dioxide.[17]

VIII. ADVANTAGES AND DRAWBACKS OF NON-INVASIVE VENTILATION

8.1 Physiological basis of the treatment effect

- Positive pressure ventilation, in general, has benefits that are common to both NIV and IPPV.
- Tight-fitting mask ensures accurate delivery of prescribed oxygen concentration.
- Positive airway pressure decreases airway closure in OSA.

8.2 Advantages when compared to invasive ventilation

- Domiciliary use is possible
- Decreased cost as compared to invasive ventilation
- Better tolerated (no need for sedation)
- Delivery of a precisely controlled oxygen concentration and airway pressure
- Better availability outside of the ICU setting (e.g. domiciliary)
- Ability to interrupt therapy for breaks allows easier weaning from mechanical support
- Does not require airway skills to commence

8.3 Disadvantages when compared to invasive ventilation

- More difficult to manage with an uncooperative patient
- Cannot be applied to patients who are physically restrained (what if they throw up? The mask is inaccessible to them.)
- Hinders physiotherapy access for suctioning and prevents proper evacuation of secretions
- Cannot be performed on patients with a decreased level of consciousness
- Mask-face interface management is challenging since "one size fits all" masks don't actually suit everyone; patients with atypical facial structures or minimal soft tissue (such as cachexia) will experience greater difficulty.
- Mask leaks are painful and reduce the therapy's effectiveness.
- Work of breathing may be increased (i.e. mandatory mechanical breaths are usually impossible or dangerous)[18]

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A RENAL REPLACEMENT THERAPY: PATIENT FRIENDLY PROCEDURE

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ABSTRACT:

Dialysis is a therapy for people whose having kidneys failure. When a person has kidney failure, their kidneys are unable to properly filter blood. Dialysis filters blood through a membrane or filter to eliminate waste materials and excess fluid. A person will feel better after dialysis but does not restore their normal state of being or their normal blood test outcomes, Until a transplant can be performed, dialysis is needed. There are two types, Hemodialysis and Peritoneal Dialysis. In hemodialysis, the dialysis machine filters the patient's blood before reintroducing in to the patient's body. In Peritoneal Dialysis, to purify the blood and drain extra fluid, the peritoneal membrane serves as a filter. Diffusion, osmosis, and ultrafiltration are the three principles of dialysis. Dialysis is a necessary procedure for the majority of renal failure patients. However, this treatment comes with side effects. Fatigue is the side effect that occurs most frequently with all types of dialysis. In addition, depending on the typs of dialysis. A Special diet require for dialysis patients it's depends on types of dialysis.

Keywords: Dialysis, Kidneys Failure, End-Stage Renal Disease. Hemodialysis, Peritoneal Dialysis.

INTRODUCTION

The first time dialysis was used to treat human patients was in 1945, replacing or enhancing the kidneys' function in someone with chronic or acute renal failure or someone who had been poisoned by a chemical that spreads easily, such as bromides, barbiturates, or aspirin.[1]

Dialysis is a therapy for people who are suffering with kidneys failure. When a person has kidney failure, their kidneys are unable to properly filter blood. Wastes and toxin consequently accumulate in the blood. Dialysis performs the function of the kidneys by eliminating waste and extra fluid from the circulation.[2] A person will feel better after dialysis but does not restore their normal state of being or their normal blood test outcomes, Until a transplant can be performed, dialysis is needed.[3]

Dialysis Meaning

Dialysis is an artificial process, it helps to excrete waste and extra fluid from the body.[4]

Definition

Person with renal failed or kidney failure may be difficulty excrete waste and excess water from the circulation.Dialysis is a artificial method of performing this procedure or process.[5]

The following ways that dialysis keeps the body balanced:

- It maintain blood pressure.
- It excrete extra water and metabolic wastes from the body.
- It prevents the dangerous levels of substances like potassium, bicarbonate, and salt.[4]

Uses of dialysis

Through the use of a membrane or filter, dialysis removes waste products and extra fluid from the blood. During dialysis, a specific fluid called dialysate is on one side of the membrane/filter and blood is on the other. The membrane/filter allows small blood wastes to pass through and into the dialysate.[6]

Which patients need dialysis

Dialysis may be required for those with end-stage renal disease (ESRD) or kidney failure. The kidney disease has five stages. Healthcare professionals define stage 5 kidney disease as end-stage renal disease (ESRD) or kidney failure. In this conditions the kidney loses 90% of its effectiveness and has a glomerular filtration rate of under 15, In those circumstances, dialysis is necessary. Dialysis may be continued for months or even years. patients must start dialysis, which prevents the accumulation of waste material in the body at elevated levels.[4]

PRINCIPLE OF DIALYSIS

The same principle applies to both types. The impurities, salt, and water are removed from the blood using a cleaning solution called dialysate. The cleansing solution receives the impurities from the blood. For this to occur, there needs to be a partition between the blood and the cleaning fluid.

In haemodialysis, the dialysis machine's filter serves as a barrier for the blood and in peritoneal dialysis, the cellular layer that lines and covers the intestines in the abdomen is known as the barrier.

Diffusion, osmosis, and ultrafiltration are the three principles of dialysis.

Diffusion:-Diffusion is the process by which toxins and wastes in the blood are eliminated; in other words, they travel from a region of higher concentration in the blood to an region of lower concentration in the dialysate.

Osmosis;- In osmosis, removes extra fluid from the blood, in which water travels from a region of low concentration potential (the blood) to a region of high concentration potential.

Ultra-filtration:- The ultrafiltration process used in dialysis includes moving a fluid under high pressure to a low-pressure region. By using negative pressure, this procedure removes fluid considerably more effectively than osmosis does.[7]

TYPES OF DIALYSIS

Dialysis can be obtained in two ways:

- Hemodialysis.
- Peritoneal dialysis.

Hemodialysis.

In hemodialysis, the dialysis machine filters the patient's blood before reintroducing in to the patient's body. As a result, two needles are put into the arm, each is connected to a dialyser through a flexible plastic tube. one in the vein to return the filtered blood to the body and the other in the artery to withdraws blood in the body.[4]

This figure 1 shows person undergoing hemodialysis.[8]

Advantages of hemodialysis

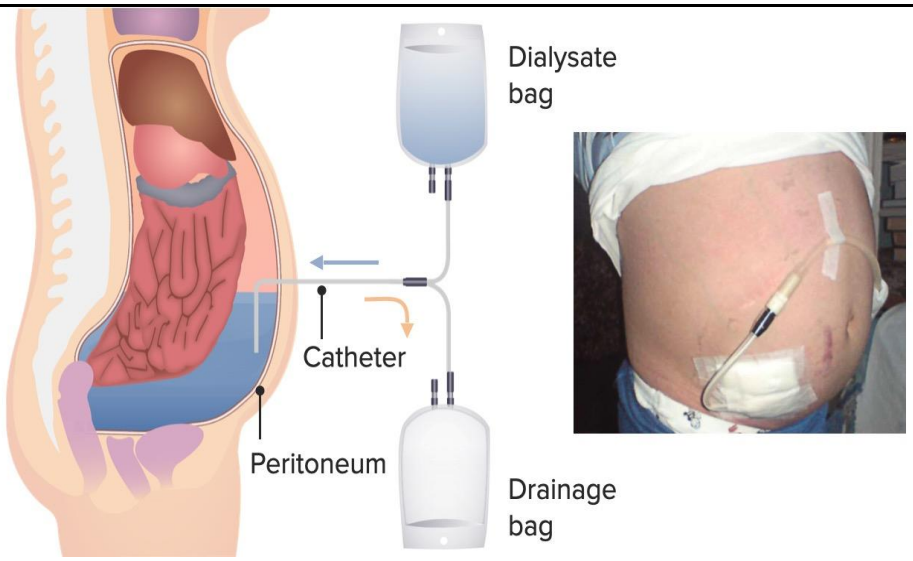
Hemodialysis allows patients to have four days a week where treatment is necessary, which is one of the main advantages over peritoneal dialysis.

Disadvantages of hemodialysis

Hemodialysis differs from peritoneal dialysis in that it frequently necessitates patients to visit the hospital three times per week for sessions that last around four hours.[9]

Peritoneal Dialysis

In this method, In order to purify the blood and drain extra fluid, the peritoneal membrane serves as a filter. A catheter is surgically implanted into the patient's stomach during peritoneal dialysis. The peritoneal membrane, a layer of tissue containing blood vessels, serves as the semipermeable barrier by allowing a cleaning solution (dialysate) to pass throughout the catheter into the peritoneal cavity. The solution is introduced into the peritoneal cavity and left there for several hours before being drained through a tube into a drainage bag. The dialysate contains a high concentration of glucose, and because of osmosis, fluid moves from the blood into the dialysate, causing more fluid to be removed than to be infused.[4]



This figure 2 shows person undergoing Peritoneal Dialysis.[10]

Advantages of Peritoneal Dialysis

The ability to do peritoneal dialysis in the comfort of the patient's home is one of its key advantages over hemodialysis. Patients can travel because of this and Peritoneal dialysis is a simple and convenient form of dialysis.

Disadvantage of peritoneal dialysis

One of the biggest disadvantages of peritoneal dialysis is that it must be performed every day and A qualified caregiver or community nurse may offer support to older people who might be unable to do the treatment on their own.[9]

Comparison of haemodialysis and peritoneal dialysis

Hemodialysis.	Peritoneal Dialysis
Draws blood from the body and filters it	Does not require drawing blood from the body to be filtered
Blood is filtered using a synthetic filter in a dialysis machine.	Blood is filtered using the peritoneum, the lining of the abdomen.
Usually performed in a hospital	Is adaptable because practically anyplace it can be done.[3]

SIDE EFFECTS OF DIALYSIS

Dialysis is a necessary procedure for the majority of renal failure patients. However, this treatment comes with side effects.

Fatigue is the side effect that occurs most frequently with all types of dialysis. In addition, depending on the typs of dialysis.

Hemodialysis

- **Hypotension:** The transient fluid loss that occurs during hemodialysis. Along with these symptoms, may experience clammy skin, fuzzy vision, and dizziness if blood pressure falls while receiving treatment.
- **Cramping muscles**: Because of a change in the mineral or fluid balance, muscle cramps might happen when receiving dialysis. Muscle cramping can be caused by deficiencies in sodium, magnesium, calcium, and potassium.
- **Skin rashes**: Waste materials in the blood may start to build up between hemodialysis sessions. This may result in itching skin for some persons.
- **Blood clots :** When an access point is installed, the blood arteries might occasionally become more constricted. This might result in blood clots or even edema in the upper portion of the body if untreated.
- **Infection :** During dialysis, frequent needle or catheter insertion can increase bacterial exposure. It may be at risk for infection or possibly sepsis if bacteria enter the bloodstream during therapy. If sepsis is not treated quickly, it can be fatal.
- **Further side effects**: Hemodialysis may also have additional dangers and side effects, such as anaemia, sleep issues, heart problems, or cardiac arrest.

Peritoneal dialysis

Common peritoneal dialysis side effects differ slightly from those of hemodialysis.

- **Peritonitis:** Peritonitis, an infection of the peritoneum, develops when germs enter the peritoneum while inserting or using a catheter. Abdominal discomfort, soreness, bloating, nausea, and diarrhoea are some of the signs of peritonitis.
- **Hernia:** When fat or an organ protrudes through a muscle's opening, a hernia develops. Dialysate puts more pressure on the abdominal wall during peritoneal dialysis, which increases the risk of abdominal hernias in patients.
- **High blood sugar:** Dialysate contains dextrose, a kind of sugar that is frequently used for intravenous nourishment. Dextrose and other sugars elevate blood sugar levels, which could put diabetics who require peritoneal dialysis at risk for hyperglycemia.
- **High potassium:** Hyperkalemia or high potassium, is a typical side effect of kidney failure. potassium levels may increase in between dialysis treatments as a result of inadequate filtration.
- **Weight gain:** The extra calories that come from giving dialysate to patients may potentially cause weight gain. But a number of other elements, including inadequate nutrition and activity, can also affect weight gain while receiving dialysis.
- **Further side effects:** Some people may develop depression as a result of the stress and anxiety that come with frequent medical treatments. Additionally, research has raised the possibility of a connection between dialysis and dementia in old age.[11]

Special diet for dialysis patients

A crucial component of treatment is healthy eating. Before dialysis it might have already undergone certain dietary alterations. The nutritionist will continue to consult with us frequently to discuss any modifications that might promote development and wellbeing.

Some persons who only excrete little amounts of urine need to limit their consumption of salt since it makes them thirsty. Retention of salt and water will raise blood pressure. However, certain persons with frequent urination may require additional salt.

Peritoneal Dialysis

The protein is lost in the cleaning solution, So the amount of protein in the diet is increased. Supplemental nutrition may be advised if person has trouble increasing his or her protein intake.The amount of energy requires may also alter because some sugar is absorbed from the cleaning fluid, especially if strong solutions are used.

Hemodialysis

If person urine output is low or if they are unable to consume enough calories, potassium levels may need to be monitored. person frequently need nutritional supplements to enhance their caloric intake.

Both types of dialysis are ineffective at eliminating phosphate. Before the phosphate is absorbed, person may need calcium carbonate to bind it in the intestines. Please consult dietician if person are unsure of which foods contain phosphate and how much person should consume.[3]

Ethical clearance:- This article is a purely a narrative review article hence it is not required an ethical clearance.

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Conflict of Interest :- Nil

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SHEEHAN SYNDROME

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Abstract :

Sheehan syndrome, also known as postpartum hypopituitarism, is characterised by hypopituitarism brought on by pituitary necrosis. The symptoms range from failure to lactate and general symptoms (such fatigue) to severe adrenal crisis and are caused on by a reduction in or lack of one or more pituitary hormones. The occurrence and treatment of PPH have a significant impact on the incidence of Sheehan syndrome. Although it is now common in developed nations, Sheehan syndrome remains a major cause to hypopituitarism in underdeveloped nations. A history of severe PPH along with clinical symptoms is used to make the diagnosis; hormone levels and/or stimulation testing can verify clinical suspicion. The only management option at this time is hormone replacement therapy

Introduction:

Sheehan syndrome, also known as postpartum hypopituitarism, is characterised by hypopituitarism brought on by pituitary necrosis. Massive postpartum haemorrhage, which impairs the blood flow to the enlarge-during-pregnancy pituitary gland, is the initial insult. Predisposing factors include a small Sella turcica, vasospasms carried on by PPH, and/or thrombosis caused on by pregnancy or coagulation problems. Autoimmunity may also play a role in the continuous deterioration of pituitary functioning. The symptoms range from failure to lactate and general symptoms (such fatigue) to severe adrenal crisis and are caused on

by a reduction in or lack of one or more pituitary hormones. Growth hormone, prolactin, follicle-stimulating hormone, and luteinizing hormone secretion are most frequently impacted by the location of hormone-secreting cells in relation to the vasculature; thyroid-stimulating hormone and adrenocorticotropic hormone secretion are also impacted by severe pituitary necrosis. Symptoms often occur years after delivery, however they may occur suddenly. The occurrence and treatment of PPH have a significant impact on the incidence of Sheehan syndrome. Although it is now common in developed nations, Sheehan syndrome remains a major cause to hypopituitarism in underdeveloped nations. A history of severe PPH along with clinical symptoms is used to make the diagnosis; hormone levels and/or stimulation testing can verify clinical suspicion. The only management option at this time is hormone replacement therapy[1].

Key words : Sheehan syndrome, hypopituitarism

Definition:

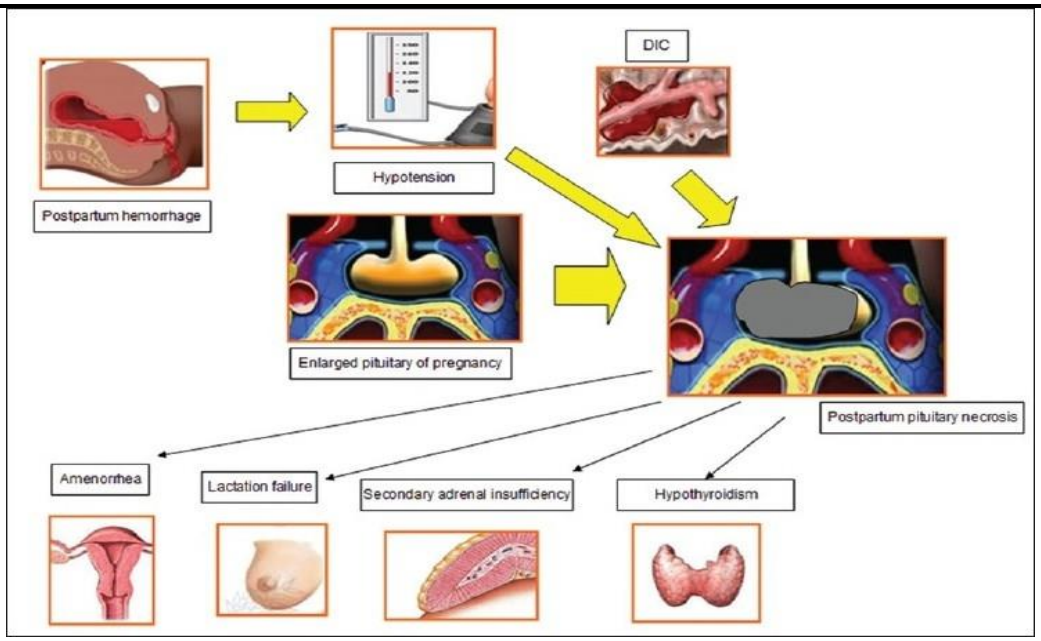
Excessive blood loss during or after delivery of a baby may affect the function of the pituitary gland, leading to a form of maternal hypopituitarism known as Sheehan syndrome (SS). Such extensive bleeding may reduce the blood flow to the pituitary gland causing the pituitary cells to be damaged or die (necrosis).

Incident rate:

Sheehan syndrome, that impacts about 5 out of every 100,000 births, is incredibly common. When there is insufficient emergency care available to stop life-threatening blood loss in difficult pregnancies, it happens more frequently.

Causes :

Sheehan's syndrome (SS) is a type of postpartum hypopituitarism caused on by pituitary necrosis. It typically results from severe hypotension or shock caused on by significant bleeding during or after delivery. Various levels of anterior pituitary hormone deficiency are present in Sheehan's syndrome patients. . If mother lose too much blood when giving birth, the pituitary gland won't get the oxygen it needs to keep healthy, which could result in cell death. During pregnancy, your pituitary gland expands and may potentially double in size. Due of its increased size, it is more susceptible to harm if it doesn't obtain adequate oxygen. The pituitary gland can't produce enough of the hormones required to control specific bodily processes as a result. Hormone deficiency can have a harmful effect on a number of basic bodily processes. A pituitary gland injury can cause hormonal deficiency, which can stop functions in human brain system, reproductive system[2].



How Sheehan's syndrome affects human body :

The body may create insufficient few of the hormones it needs to carry out critical activities if the pituitary gland is damaged. One could have one or more of the following hormone deficits, depending on the severity of the injury:

• **Adrenocorticotrophic hormone (ACTH):** Promotes the body's main stress hormone, cortisol, to be produced. Both blood pressure and blood sugar levels are maintained by cortisol. It enables human body to react to pressure and stress in a useful way.

• **Thyroid-stimulating hormone (TSH):** This hormone stimulates the thyroid gland, which controls human nervous system, energy levels, and metabolism.

• **Growth hormone (GH**): Supports the maintenance of skeletal muscle mass, bone density, and fat distribution.

• Follicle-stimulating hormone (FSH): Causes an egg to develop each month by boosting the production of oestrogen in the ovaries.

During the menstrual cycle, luteinizing hormone (LH) stimulates ovulation, which is when your ovaries release an egg.

• **Prolactin (PRL):** Encourages lactation, when you are pregnant and enables breastfeeding .

• **Antidiuretic hormone (ADH or vasopressin):** Controls and maintains a healthy level of sodium and water in the body. 5% of persons with Sheehan syndrome may develop diabetes insipidus, a condition marked by issues controlling the levels of salt and water in their bodies[3].

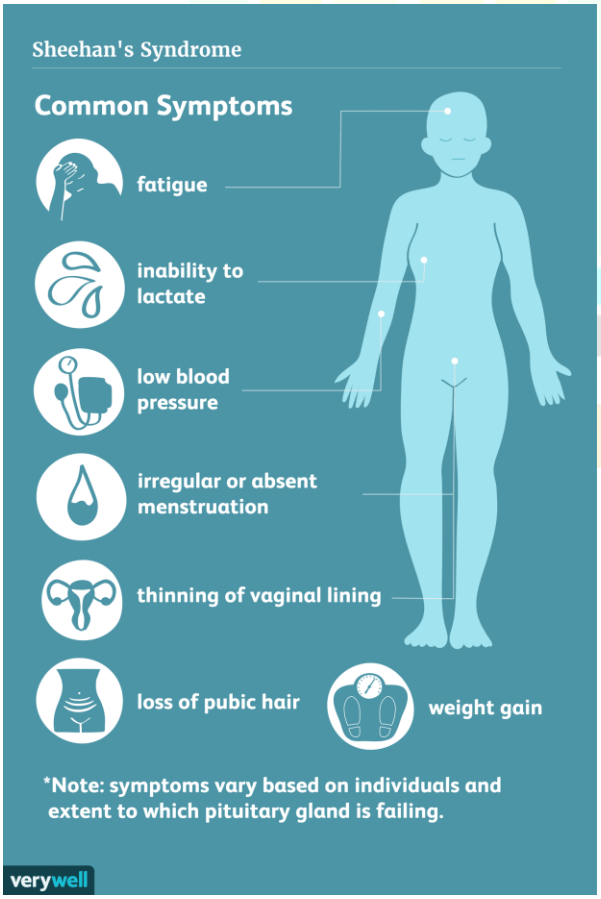
Signs and symptoms :

- After giving birth, women may have difficulty breastfeeding or your milk may never come in.

Menstruating less frequently or not at all (amenorrhea).

- Vaginal atrophy and thinning vaginal walls that make sexual activity uncomfortable.
- excessive thirst or frequent urination both during the day and at night.
- pubic and underarm hair loss, as well as breast reduction.
- both an increase in weight or a loss of muscle.
- an intolerance to the cold.
- fatigue and difficulty focusing.
- Low-key sex drive
- dry skin

The body may not produce enough stress hormone to react to a stressful life event, such as surgery, an infection, or an injury, so you may not suffer symptoms until thereafter. An adrenal crisis is what this is. An adrenal crisis need prompt medical intervention[3].



Diagnostic evolution:

Using the following criteria, a doctor may determine that you have Sheehan syndrome if you exhibit any of the symptoms listed below:

• Medical background. Any blood loss or other difficulties you experienced during prior deliveries should be disclosed to your provider. Inform them of any subsequent symptoms (for instance, having trouble producing breast milk or not resuming periods). Inform your physician about any symptoms you are having, including when they happen and what makes them better.

• Blood exams. Giving blood will enable your doctor to check the hormone levels linked to the operation of your pituitary gland.

• Imaging. An MRI can assist your doctor rule out alternative reasons of the symptoms, such as a pituitary gland tumour. If the MRI results are uncertain, they might request a CT scan.

• Evaluations of hormone levels. The doctor may examine hormones including cortisol, IGF-1, TSH, T4, estradiol (an oestrogen), ACTH, FSH, and LH.

• Tests of stimulation. In order to monitor how the pituitary gland reacts, a doctor may administer patients medication to increase the production of specific pituitary hormones[3].

Treatment :

To make up for the hormones that body is no longer producing, people will need to take hormone supplements for the rest of your life. These hormones could consist of:

• **Corticosteroids**: To make up for a lack of adrenocorticotropic hormone (ACTH), you can take hydrocortisone . If you are experiencing a high-stress circumstance that requires your body to increase cortisol production, your dosage may need to be modified (like surgery).

• **Thyroid hormones:** To make up for a low TSH level, you can take levothyroxine . Your thyroid hormone levels will be used to adjust the medication dosage.

• **Sex hormones:** Women can take hormones to control your menstrual cycle, help in pregnancy, and relieve the symptoms of premature menopause. Progesterone and/or oestrogen are components of medications.

• **Growth hormones:** If overall muscle mass is declining due to changes in pituitary gland function, taking growth hormones may be able to help[3].

Prevention :

You are unable to lower your risk. The frequency of Sheehan syndrome should give you some comfort. Your risk of developing Sheehan syndrome is significantly decreased by having a skilled medical team that can stop pregnancy issues like extreme blood loss.

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C-SECTION SCAR: SELF MASSAGE TECHNIQUES

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ABSTRACT

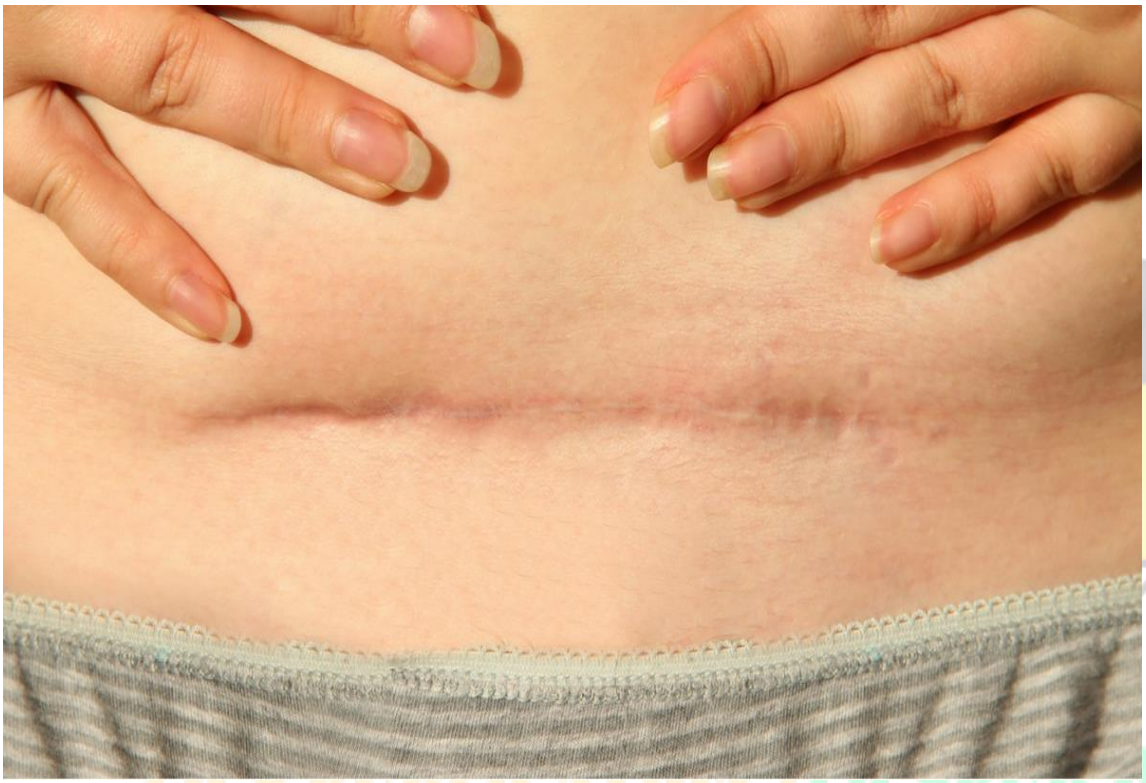
A C-section (or cesarean birth) is a surgical procedure used to deliver a baby when a vaginal delivery can't be done safely. A c-section can be planned ahead of time or performed in an emergency. It carries more risk than a vaginal delivery, with a slightly longer recovery period. Massaging your C-section scar can help its healing process and improve its appearance. The healing process takes time and is divided into four stages. It is important to wait to begin massage until your healthcare provider gives you the go-ahead. Massage the area around the scar after massaging the scar itself by gently pushing the skin and applying pressure. The goal is to loosen the scar from the tissue. Create a routine that feels right for you. This massage routine is safe to perform monthly to biweekly until the child is two years old.

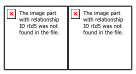
KEYWORDS

Cessrean section, Massaging, Healing process, Adhesion, Pus drainage.

INTRODUCTION

The birth of a new baby is an exciting time, and you will spend a lot of time caring for your child in the coming weeks and months. That being said, it is critical for new mothers to take care of themselves as well, especially if your delivery included a C section. Because a C section is a major abdominal surgery, it is critical to allow for adequate rest and recovery time. To care for a C section scar, you should take all necessary steps to heal the incision, clean the area around the scar, and monitor the scar.A post-c-section massage is one of the most important things you can do to care for and heal your scar after having a c-section. Scar tissue can be painful at first, and if left alone, it can cause problems in your pelvic floor muscles and abdominal wall. A scar massage can help you avoid these complications and heal your scar.





What ways can massage help with c-section scars?

- Massage is beneficial for your caesarean section scar because it prevents scar tissue from growing in undesirable places, smoothes out thick scars, and increases blood flow, all of which aid in c-section scar healing. The healing process takes time and is divided into four stages:
- The first stage is haemostasis, which occurs when clotting factors in your blood stop the bleeding.
- The second (inflammation) stage involves scabbing over and clearing away toxins and infections.
- The third phase (proliferation stage) is the rebuilding stage, and this is when massaging your scar will be most beneficial. It may feel itchy and sensitive once healed and formed because the nerve endings within the tissue are actively healing. When pressed on, it may feel numb, tingly, or even painful in places. It is still red at this point, but it will fade to normal skin tone over time.

- The scar strengthens during the fourth phase (maturation). Scar tissue can form up to a year after your C-Section. The scar is mature when the body no longer produces scar tissue. Massage can still be helpful.

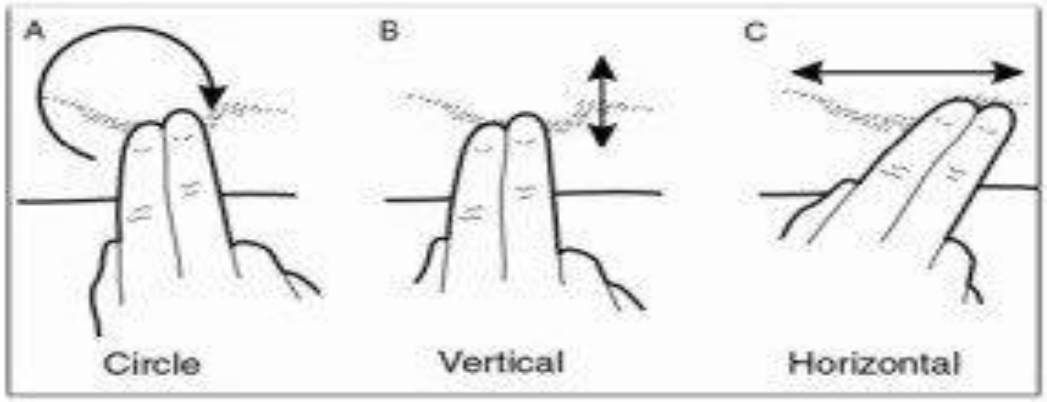
How should the C-section scar be massaged?

Massage your scar with a gentle oil such as coconut oil or vitamin E oil. When you're ready, coat your index fingers in oil, then use your thumb and fingers to massage in small circular motions. Apply gentle pressure so that the scar can move but is not painful. Massage the area around the scar after massaging the scar itself by gently pushing the skin and applying pressure. In other words, give yourself a gentle abdominal massage. The goal is to loosen the scar from the tissue.

Stages to massage a c section scar

You should be gentle when massaging your scar in the beginning until it becomes less red and painful.

❖ **The first stage is the skin.**



✧ After your 6-week check-up, or sooner if the scar is considered well healed, you can begin gentle massage.

✧ Initially, the scar may be tender, red, and painful, and depending on the length of the scar, it may be best to work around it, working the tissues above and below it.

✧ As the scar softens, you can repeat this procedure with your fingers directly on top of the scar:

✧ Wear loose, comfortable clothing that allows easy access to the scar area, and keep your legs straight and relaxed.

✧ First, gently massage the oil into the skin around the scar.

✧ Place your fingertips lightly on the skin above the scar and move them up and down to see how mobile the skin is.

✧ If it moves down more than up, that's normal; try to move it up more. Does it move faster on one side than the other? Is one side of your body achy? This is also acceptable. Discomfort is acceptable, but not excessive pain; also, try to relax.

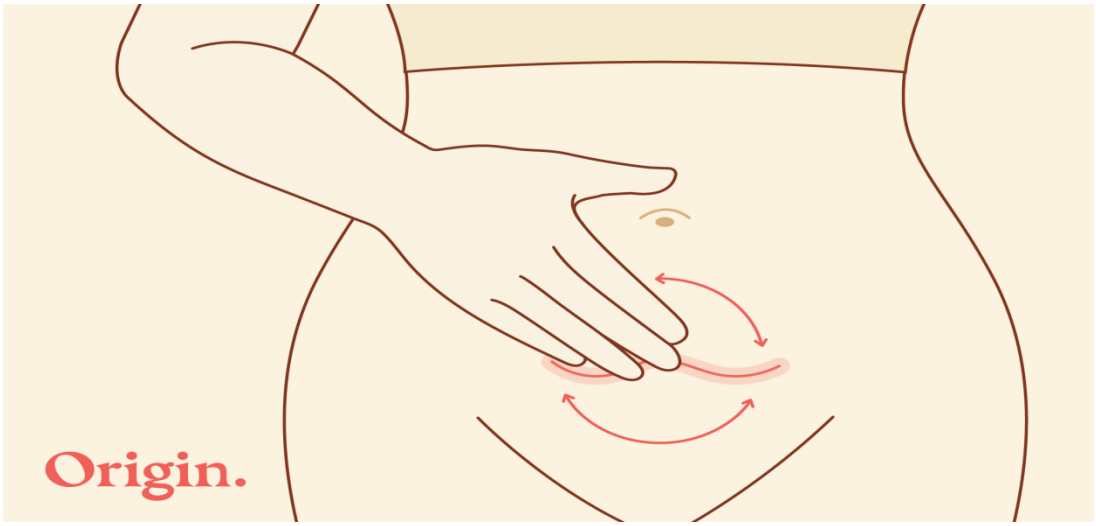
✧ If you find a stiff or tight spot, hold it and breathe - you may feel a release or the tissues relax.

✧ Move your fingers up and down, side to side, and in small circles over your skin.

✧ Begin by working the tissues around the scar, then progress to the tissues on top of the scar as your pain and tenderness allow.

✧ You will eventually be able to pick up the scar skin and roll it between your fingertips.

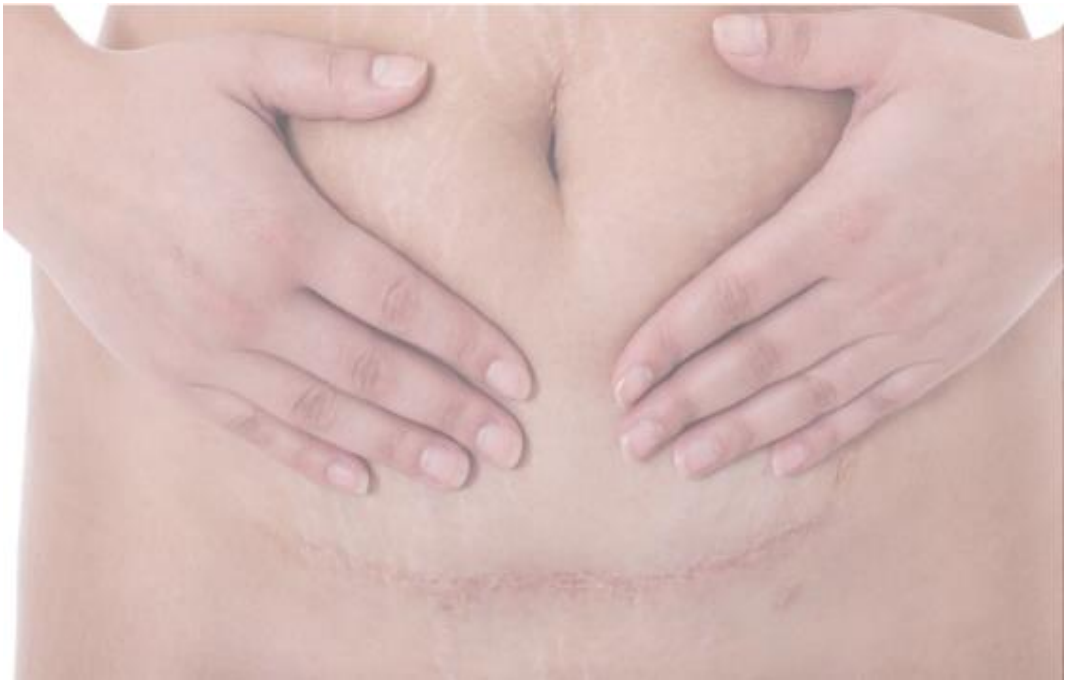
❖ **The second stage is the muscle layer.**



- ✧ The muscular layer is just beneath the skin and fat, and you may or may not feel your abdominal muscles. It is acceptable to feel slightly uneasy during this massage, but it should not be painful.
- ✧ Allow your fingers to melt deeper into your abdomen and observe how the tissues in this layer move.
- ✧ It is normal for one side to move less than the other. Most people notice that one side of the scar is more constrained than the other. It's possible that the knot from the stitches finished on that side, or that some nerves were compressed, but there's usually one side that's more painful.
- ✧ Keep your fingers deep and embedded in the flesh, moving them up, down, side to side, and in small circles around the scar, as you would with skin.
- ✧ Put your fingers as close to the scar as the tenderness allows. Adhesions can form where the scar tissue attaches to your bowel, allowing you to work further out and around the scar as desired.
- ✧ Focus on any tightness to encourage movement in that direction by gently moving the tissues to where they don't want to go and holding them there for a few seconds.
- ✧ You may experience a slight burning sensation, which is normal during tissue stretching.

- ✧ Hold until you feel the tissues softening or melting or the scar tissue releasing a little under your fingers.
- ✧ Don't be too rough with the massage. Proceed at your own pace until you notice softening and improvement in the area under your fingers.
- ✧ Excessive force may cause tissue tightening and refusal to release. Most importantly, relax, breathe deeply, and massage to tenderness rather than extreme pain.

❖ **The third stage is the deep muscle**



✧ In the final stage, you are working at a very deep level. If you've ever had your abdomen checked for appendicitis or kidney problems, a doctor would have felt it this way - it's a massage that firmly moves the deeper tissues.

✧ Bend your knees to relax the lower abdominal muscles. This allows you to massage the deepest layer of skin. Remember to press your fingers deeper into the tissues surrounding your scar.

✧ Massage your scar on the surface and lower down near the pubic bone. Sink deeper into the muscles and see if you can move these deeper tissues from side to side and up and down.

✧ This deeper level massage may keep you from developing lower back pain or frequent urination in the future.

✧ Ensure that both sides are massaged thoroughly and feel equally mobile. If one side is tighter than the other, massage it in the direction it won't move until you can't move it any further. Hold it there gently until you feel the tissues melt and release under your fingers.

✧ Relax and breathe deeply, then check the mobility of the tissue to see if it feels the same from side to side.

How much time should I spend massaging my c-section scar?

Create a routine that feels right for you. Begin with 5 minutes per day for the first few weeks after the birth, until your tissues are freely moving in all directions with all three layers. This may take a few weeks or longer- everyone is different. Reduce the frequency of massages to once a week, noticing any stiff or tight areas and working with them. Then, every now and then, massage the area. The week following your period is ideal because you will experience no additional tenderness or irritation. This massage routine is safe to perform monthly to biweekly until the child is two years old.

Who Should Stay Away From It?

Before beginning a daily scar massage routine, consult with your healthcare provider. Scar massage should be avoided if the scar: is less than three weeks old; or is an open incision or cut.
Infection symptoms include increased pain, redness, and pus drainage.

Conclusion

C-section scar massage can help to promote healing and improve the appearance and feel of your scar. Talk to your healthcare provider about starting a regular scar massage routine once your incision has healed and you have been out of the hospital for at least three weeks. Keep the scar moisturized and make small circles along the scar's line with gentle pressure. Massage the skin around the scar is also beneficial.

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CORD BLOOD BANKING

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ABSTRACT

The most potential source of stem cells is umbilical cord blood (UBC), which has a low cost of collection and enormous advantages. Due to the progenitor qualities of the cord blood, also known as stem cells, it is employed to treat both malignant and nonmalignant disorders.

Umbilical cord blood is taken as soon as the infant is delivered and stored in a process called cord blood banking (CBB). Since the appropriate storage of these progenitor cells requires great care and attention, cord blood banks—which come in two varieties: public and family banks.

It offers advantages over other sources of stem cells due to its immunological immaturity and strong flexibility. Due to the neutral differentiation capacities of the stem cells isolated from cord blood, medical practitioners are able to develop functional brain cells from these stem cells.

KEYWORDS

Umbilical cord blood, Cord blood banking, hematopoietic Stem cells

INTRODUCTION

In order to create a link between the foetus and the placenta in the mother's uterus, the umbilical cord, a thin, long tube-like structure with a high percentage of muscle, is required. The umbilical cord has two deoxygenated arteries and one vein that transport oxygenated blood to the developing foetus. The umbilical cord is made up of these 3 blood vessels, which coil helical-style around the vein[1].

In the past, umbilical cord blood was regarded as waste and was disposed of after birth together with the placenta. It has been discovered to be a rich source of life-saving hematopoietic stem cells with medical advancements, and has saved many lives in recent decades[2].

Following delivery, there are two methods for collecting the blood from the umbilical cord: syringe collection or bag collection[3]. For transplants and to cure immunological dysfunctions, cord blood is used instead of bone marrow. When an infant is newly born, this blood is discovered and removed from the umbilical cord[4].

According to current data, over 50,000 transplants have been successfully performed worldwide, and over 80 diseases can now be totally treated with umbilical cord blood stem cells. Cancer and blood disorders, which had previously always been fatal for those affected, are some of the diseases that have been treated[5].

However, a number of private cord blood banks have emerged in recent years that urge parents to store their children's umbilical cord blood (UCB) for future autologous use or directed donor allogenic usage for a relative.

CORD BLOOD

After a baby is born and the umbilical cord is cut, some blood remains in the blood vessels of the placenta and portion of the umbilical cord that remains attached to it. After birth, the baby no longer needs this extra blood which is called umbilical cord blood or "cord blood"[6].

Red blood cells, white blood cells, platelets, and plasma are all components of blood that are often present in cord blood. But it also contains a lot of hematopoietic stem cells, which are akin to bone marrow-like cells.

CORD BLOOD BANKING MODELS[6]

1. PUBLIC USE BANKING

For transplants involving allergens, public cord blood banks collect, prepare, and store cord blood units. These organizations keep cord blood units that parents have kindly donated for the use of any patient in need. They are frequently funded by the national health systems.

Parents who give their child's cord blood to a public use bank must sign an informed consent form allowing the bank to include their child's cord blood on a national registry that can be searched to discover a patient match. There is no information regarding the donor's name; the cord blood is just classified according to its tissue type. The number and diversity of the cord blood stocks that are available determine the success of locating compatible donors. For this reason, information on stored units is shared by all national registries throughout the world. This makes it easier to match every receiver in need with the most compatible and appropriate donor.

2. FAMILY USE BANKING

Family use cord blood banks gather, process, and store cord blood units for autologous or family use, which means that these cord blood units will be kept solely for the donor's or a member of his or her family's use in the event that they later develop a condition that necessitates the use of hematopoietic stem cells.

The majority of these banks are for-profit businesses that operate in the private sector. The baby's cord blood is collected and stored in these banks for a charge, and these units are not made accessible to the general public through national or international registries.

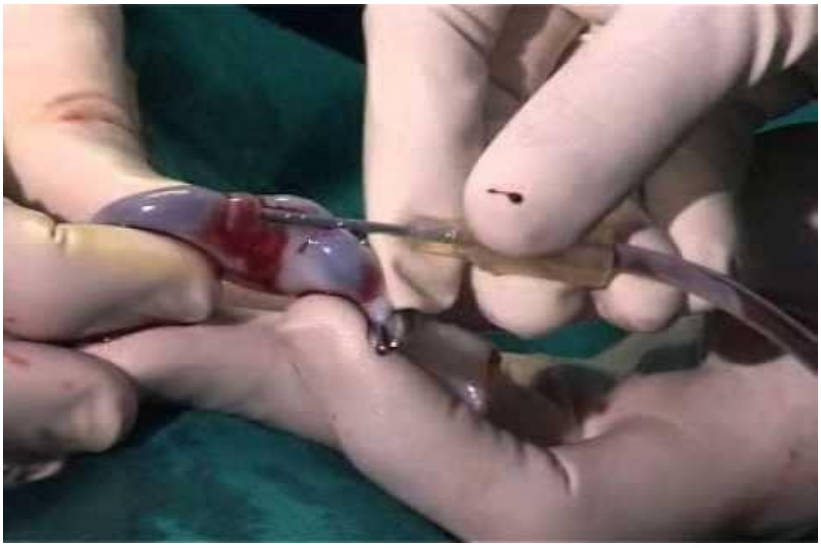
UCB COLLECTION METHOD[7]

Umbilical cord blood is collected from the umbilical vein either before the placenta is delivered (in utero) or following placental delivery (ex utero).

IN UTERO METHOD

In order to lower the danger of infection and contamination from maternal fetal fluid, the conventional in utero approach for cord blood collection employs a closed collecting device. About 3 to 5 cm from the umbilicus, the umbilical cord is double-clamped and then transected between the clamps. A povidone iodine applicator is used to prepare the cord for venipuncture after the infant has been taken out of the field. The CBU is then collected by gravity once the cord collection kit's needle has been placed into the umbilical vein.

The cord collection operation takes between 5 and 10 minutes to complete, and additional staff is not needed.[7, 8, 9].



EX UTERO METHOD

As soon as the placenta has been delivered, ex utero cord blood collection is carried out by devoted, qualified workers in a separate room using a standard collecting bag. The placenta is suspended on a specially made platform, and the cord blood is collected by gravity[8]. The approach needs additional trained individuals, resources, and money but minimizes the number of non-conformances related to the collection of units from staff who are not linked with the bank. This method permits birth unit staff to concentrate on mother and baby health. The potential for reduced total nucleated cell counts and cord blood volume are drawbacks of this approach[10,11]

Advantages of using cord blood to treat disease[12]

Using the stem cells in cord blood to treat a disease has the following benefits compared with using those in bone marrow:

- More people can receive stem cells from cord blood than from bone marrow. A cord blood transplant is more likely to result in a match than a bone marrow transplant.
- Additionally, compared to bone marrow stem cells, cord blood stem cells are less likely to result in rejection.
- Cord blood collection is simpler than bone marrow collection. Bone marrow extraction is risky and might be uncomfortable for the donor.
- Cord blood can be preserved by freezing it. Anyone who needs it can have access to it. As soon as bone marrow is harvested, it must be used.
- The immune system can be boosted during cancer treatment using stem cells from cord blood.

What problems can occur with cord blood collection? [12]

• Cord blood collection is occasionally insufficient. This could occur if the baby is premature or if the decision is made to put off clamping the umbilical cord. It may also occur for unknown reasons. Additionally, if a medical emergency arises during delivery, taking care of mother and baby will take precedence over collecting cord blood.

CAN ALL MOTHERS DONATE THEIR CORD BLOOD?

Every healthy mother with a normal pregnancy can donate cord blood.

But, under certain conditions, mothers are not allowed to donate cord blood. Some of the conditions are:

- Twins or multiple birth
- Premature births
- When the baby's mother, father or siblings have had some type of cancer
- When the mother has diabetes and takes insulin that contains animal product(bovine insulin)
- When the mother has received an organ or tissue transplant in the last 12months.

- When the mother has lived in a part of the world where certain diseases that are carried in the blood are more frequently contracted.

COMPARISON BETWEEN OLD AND NEW METHODS OF EXTRACTING AND PRESERVING UMBILICAL CORD STEM CELLS[13]

Early extraction methods

The collected cells were cultured in a dish and then transplanted into mice, ex vivo expansion and then in vitro transplantation. Once the cells were grown, they were spun in a centrifuge in order to spin them down to separate and extract them. A major limitation observed in this method was that too much plasma contents were collected with not enough MNCs (Mono Nucleated Cells) and no reliable way to concentrate and isolate stem cells [13].

Modern Extraction methods

Modern techniques were developed by automating comparable processes. Red blood cells (RBCs), plasma, and an intermediate layer known as the Buffy layer are among the first layers of the cord blood to be separated. White blood cells and the most important stem cells are known to be abundant in the buffy layer. Then, using a proper processing technique, cord blood is better separated into these several layers, making it easier to collect more stem cells[13].

Five separation methods used are Plasma Depletion, Density Gradient, Hetastarch, PrepaCyte and Automated centrifugal machine[1 4] .

Currently the PrepaCyte is the latest and best used proprietary method. It is very similar to the closed method but uses a machine [15].

CONCLUSION

The umbilical cord is thin, long tube-like structure highly composed of muscle that is needed to form a connection between the fetus and the placenta, in the mother's uterus. After birth, the blood in the umbilical cord can be collected in two ways, either by a syringe or bag method. The cord blood is used as an alternative to bone marrow to restore immunological dysfunctions and for transplantations.

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NOURISHMENT FOR KIDNEYS; RENAL DIET

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ABSTRACT:

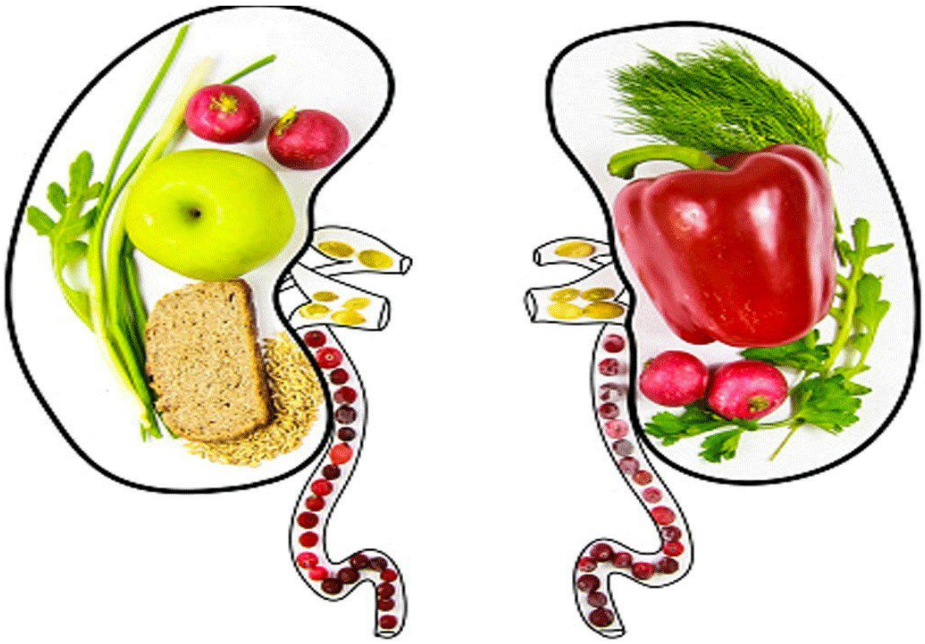
Renal is just another way of saying “kidney”. Diet is a specific food plan to which a person places limits. The renal diet is a specific eating regimen created to help people with kidney disease manage their symptoms and keep their kidneys healthy. Limiting the amount of potassium, salt or sodium, liquids, and phosphorus the body consumes is a hallmark of a healthy renal diet. High-quality protein is also emphasised as part of a renal diet. A person with kidney illness, particularly those with renal failure, require a special diet to manage the accumulation of waste products that the body needs to get rid of but that the kidneys are no longer able to do. One of the body's three main electrolytes is sodium. The amount of sodium is higher in urine. Potassium helps to maintain a normal heartbeat and healthy muscular function. Maintaining fluid and electrolyte equilibrium in the bloodstream also requires potassium. Phosphorus is a mineral that is essential for bone formation and maintenance. Moreover, phosphorus helps with muscle mobility, connective tissue development, and organ growth. Protein waste builds up in the blood when the kidneys are injured because they are unable to filter it out. Essential amino acids should be substituted for proteins in cases of renal failure. Fluid management is crucial for people with chronic kidney disease who are in the later stages of the disease since normal fluid intake may lead to harmful fluid buildup in the body.

Keywords: Sodium, Potassium, Phosphorus, Protein, .Fluids, Diet, Food.

INTRODUCTION:

Living a disease-free lifestyle is just one aspect of being healthy. A healthy lifestyle that prioritises physical wellbeing is essential to maintaining good health. However, A balanced diet often includes foods from the major dietary groups. A longer, better life may be facilitated by eating the healthy food.[1]

"Renal" is just another way of saying "kidney". Diet is a specific food plan to which a person places limits. Limiting the amount of potassium, salt or sodium, liquids, and phosphorus the body consumes is a hallmark of a healthy renal diet. High-quality protein is also emphasised as part of a renal diet. A person with kidney illness, particularly those with renal failure, require a special diet to manage the accumulation of waste products that the body needs to get rid of but that the kidneys are no longer able to do. A particular renal diet helps the kidneys work less hard and keeps it from losing its abilities. Because every person's body is unique, it is essential that every patient collaborates with a renal dietician to develop a diet that is suited to their requirements.[2]



A renal diet is a nutritious diet for the kidneys. The worst part is that no one renal diet is suitable for everyone. What type of kidney illness person having and how well kidneys work greatly influence ability to maintain a balanced renal diet. Understand that there is no single diet that can reverse or stop the progression of renal disease.[1]

Renal Diet

The renal diet is a specific eating regimen created to help people with kidney disease manage their symptoms and keep their kidneys healthy. This diet is made to reduce the consumption of substances like sodium, potassium, and phosphorus that can damage the kidneys while yet providing a sufficient amount of nutrition.[4]

What kind of diet planed for people with kidney illness?

Controlling essential nutrients including sodium, potassium, and phosphorus as well as encouraging high-quality protein consumption and restricting fluid intake may be necessary for those with renal problems. Please discuss doctor or the certified dietitian about unique dietary needs.[2]

Sodium:-

Most natural foods include the mineral sodium. Sodium intake on a renal diet should be restricted to 1,500–2,300mg per day for all stages of kidney disease. This reduces edoema and blood pressure.[1]

One of the body's three main electrolytes is sodium (potassium and chloride are the other two). The amount of sodium is higher in urine. The flow of fluids into and out of the body's tissues and cells is regulated by electrolytes. Sodium helps with:

- controlling blood volume and pressure.
- controlling muscular contraction and nerve activity.
- controlling the blood's acid-base equilibrium.
- balancing the body's fluid retention and excretion.[2]

Effects of sodium in kidney failure patients:

Because their kidneys cannot effectively remove extra sodium and fluid from the body, people with kidney disease may experience negative effects from eating too much sodium. The accumulation of salt and fluid in the tissues and bloodstream can lead to:

- higher thirst.
- swelling in the hands, face, and legs.
- Hypertension.
- Heart failure: Your heart might become enlarged and weak if there is too much fluid in the bloodstream, which overworks it.
- Shortness of breath: fluid accumulation in the lungs can make breathing difficult.[2]

Here are some recommendations.

1. Avoid adding salt to meals when cooking.
2. Avoid adding salt to your food when you eat.
3. Become familiar with reading food labels. Eat less food if it has more than 300 mg of salt per serving (or 600mg for a complete frozen dinner). Avoid foods where the first four or five ingredients on the ingredient list are salt.
4. Only select canned vegetables.
5. Avoid using flavoured salts like garlic or onion salt.
6. Avoid buying frozen or chilled meats that are packaged in a solution.[5]

Potassium:-

The mineral potassium occurs naturally in the body as well as in many of the foods we consume. Potassium helps to maintain a normal heartbeat and healthy muscular function. Maintaining fluid and electrolyte equilibrium in the bloodstream also requires potassium. The kidneys helps in maintaining the proper level of potassium in the body and remove any excess through the urine. Aldosterone production increases when the plasma potassium concentration rises.

Effects of potassium in kidney failure patients:

As the kidneys fail, the body's potassium levels rise because the kidneys are unable to eliminate extra potassium. Hyperkalemia, or having too much potassium in the blood, can lead to:

- Low heartbeat.
- Heart problems.
- Weakness in the muscles.
- irregular heartbeat
- Death.[2]

The majority of foods that contain potassium include fruits and vegetables, milk, and meats. Thus, must avoid a few fruits and vegetables. Foods high in potassium that should be avoided include:

1. Watermelon.
2. Bananas.
3. Oranges and orange juice.
4. Avocado.
5. Prune juice.
6. Tomato sauce and tomato juice.
7. Dried beans.
8. Cooked greens, spinach, kale, collards and Swiss chard.
9. Broccoli and Brussels sprouts.
10. Nuts and nut butters.[5]

Phosphorus:-

Phosphorus is a mineral that is essential for bone formation and maintenance. Moreover, phosphorus helps with muscle mobility, connective tissue development, and organ growth. The small intestines absorb phosphorus when phosphorus-containing food is ingested and digested so that it can be deposited in the bones.

Effects of phosphorus in kidney failure patients:

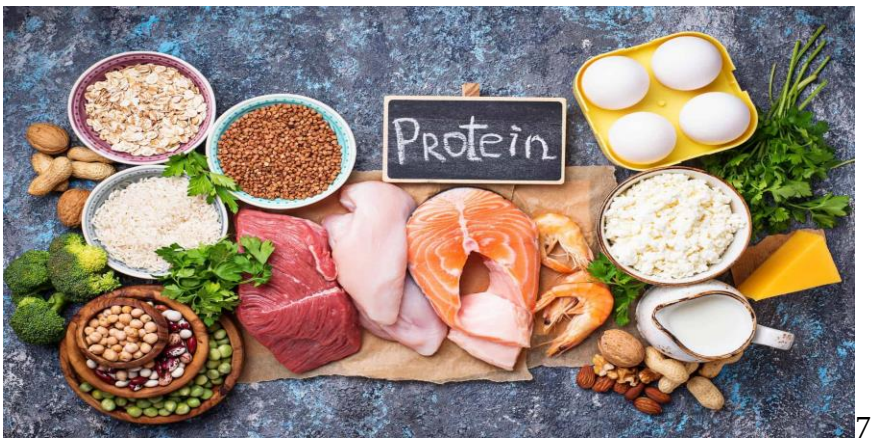
Excess phosphorus in the blood can be removed by healthy renal function. The kidneys stop removing too much phosphorus when renal function is impaired. Phosphorus levels that are too high might cause the bones to lose calcium, weakening them. Moreover, this causes risky calcium buildup in the heart, lungs, eyes, and blood vessels. Until CKD is highly advanced, natural sources of phosphorus are typically not prohibited.[2]

Phosphorus is also present in several veggies. Reduce these,

1. Beans that are dried.
2. Broccoli.
3. Mushrooms.
4. Brussels sprouts.

Protein:-

Healthy kidneys have no issues with protein. The normal process of eating protein results in the production of waste products, which are then filtered by the kidney's nephrons. The waste eventually becomes urine with the aid of extra renal proteins. Protein waste builds up in the blood when the kidneys are injured because they are unable to filter it out. Essential amino acids should be substituted for proteins in cases of renal failure.



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For people with chronic kidney disease, consuming the right amount of protein can be challenging because the requirement varies depending on the stage of the illness.[2] A healthy renal diet is fairly low in protein in CKD stages 1-3. In these early phases, the majority of people should aim for 0.8 grammes of protein per kilogramme of body weight each day. Protein recommendations decrease as CKD advances to stages 3–5. In this period, consume 0.55 to 0.6 g of protein per kilogramme of body weight.[6]

An individual who has undergone a kidney transplant should limit their protein consumption. For tissue maintenance, it is crucial.[2] Protein requirements rise during dialysis. Maintaining muscle mass and preventing poor nutrition in dialysis patients requires a diet rich in protein. For those who are receiving

dialysis, protein recommendations increase to 1.2 grammes per kilogramme of body weight per day.[6] So, it's crucial to consume the required amount of food for particular illness stage as advised by a nephrologist or renal dietitian.[2]

Fluids:-

Fluid management is crucial for people with chronic kidney disease who are in the later stages of the disease since normal fluid intake may lead to harmful fluid buildup in the body. Since those on dialysis frequently have decreased urine output, having more fluid in the body might place undue strain on the heart and lungs.

 [7]

Depending on the patient's urine production and the dialysis parameters, a specific fluid allowance is determined.[2] Unless renal disease is highly advanced, most patients with kidney disease do not need to limit fluid intake. Around 2 litres of water per day should be consumed by most patients on a renal diet for kidney disease.[6]

In order to limit fluid intake, patients should:

- Not exceeding the amount prescribed by a doctor.
- Tally up all the items that melt at normal temperature.
- Be mindful of how much water is used when cooking.[2]

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A REVIEW ARTICLE ON SPERM BANKING (CRYO BANK)

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ABSTRACT:

The term "sperm bank," "semen bank," or "cryobank" refers to a place or business that purchases, stores, and sells human sperm. Men who are known as sperm donors generate and sell semen. In order to achieve a pregnancy or pregnancies other than those carried by a sexual partner, the sperm is acquired by or for other people. Donor sperm is sperm that has been sold by a sperm donor.[1] A sperm bank may be a distinct organisation that provides donor sperm to people, fertility centres, or clinics, or it may be a facility administered mostly or solely by a clinic or other medical facility for its patients or clients. [2] If sperm banks are permitted to function, they are frequently subject to municipal legislation that may serve to balance the opposing viewpoints around their operation while also primarily protecting the unborn child.

Key Words: Sperm bank, Cryo bank, Sperm donor.

INTRODUCTION:

By using donor sperm for insemination, it is possible to get pregnant with results that are comparable to those of sexual activity. The procedure is a type of third party reproduction because it uses sperm from a donor rather than the partner of the sperm recipient. The majority of people without a male partner in the 21st century use donor sperm from a sperm bank for artificial insemination. The first sperm banks were founded in 1964 in Tokyo, Japan, and Iowa, USA, as a medical treatment strategy to assist people who

were infertile. Throughout the following 40 years, more than 1 million babies were born.[3] Those who otherwise wouldn't be able to conceive naturally now have the chance to parent thanks to sperm banks. Sperm banks are not permitted to be founded or run in many regions of the world. If sperm banks are permitted to function, they are frequently subject to municipal legislation that may serve to balance the opposing viewpoints around their operation while also primarily protecting the unborn child. [4]

DEFINATION:

The procedure of conserving sperm through freezing. To count sperm cells and assess their health, samples of semen are taken and examined under a microscope in the lab. The sperm are then frozen and kept in storage.[5]

PURPOSE OF SPERM BANK

It's a very personal choice to bank their sperm. In the future, people could want to use their sperm to have children. But, people might not be able to have a child through sex given the existing scenario or circumstances (intercourse). conditions or situations like:

Medical issues. Leukaemia, Hodgkin's lymphoma, and testicular cancer all carry a high chance of making men infertile.

• **Specific therapies.** Women might not be able to get pregnant because of some therapies (infertility). Chemotherapy, orchiectomy, and gender affirming surgery are a few examples. The sperm cell counts may dramatically decline while others may no longer be able to produce sperm as a result of these therapies.

• **Age.** There are millions of fresh sperm cells produced daily by most men . The quality of the sperm, though, can deteriorate as you become older. Men over the age of 40 are typically affected by this.

• **Low sperm count.** If men's are under 40, they may have a low sperm count. Via assisted reproductive techniques, couples can still have children even if you only bank a little amount of sperm of high quality. In vitro fertilisation with intracytoplasmic sperm injection is one efficient method (ICSI).

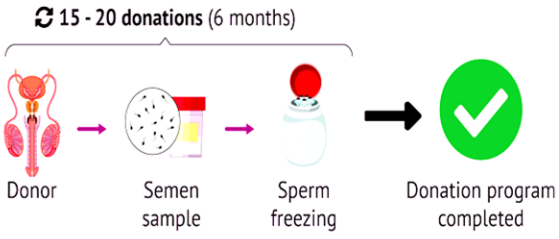
• **Regular travel**. Several folks make frequent business trips. When a woman or someone who was assigned female at birth (AFAB) tries to conceive, it's preferable to do so during her reproductive window (five days before ovulation up to one day after ovulation). If both of you are on vacation and your spouse ovulates, they might use your frozen sperm to conceive.

• **Military mobilisation.** The reproductive organs could become damaged if you work in a hazardous military environment.

Vasectomy. As a method of birth control, a vasectomy is frequently used. But, as individuals become older and decide they want children, they might have second thoughts.

PROCEDURE OF SPERMS BANK:

During sperm banking, donor will go to a special healthcare facility called a fertility clinic. A healthcare provider will lead you to a private room and give you a special container.



- Typically, the container is a tiny plastic jar with a screw-on cover. Condom collections are also available at some fertility clinics. Over-

the-counter (OTC) condoms are distinct from collection condoms. The sperm may be harmed by OTC condoms. Many additionally include lubricants that destroy sperm cells (spermicide).

- Users will masturbate in the solitude of the space while using the unique container to collect your semen.
- Saliva is one lubricant that can harm or slow down your sperm. To provide lubrication, a doctor can give you a sperm-safe lubricant that has been authorised.
- It is a private act to masturbate. Some individuals find it challenging to provide a semen sample away from the comfort of their homes. It might be able to utilise a home sperm-banking kit if couples can't or don't feel comfortable masturbating at a reproductive clinic. The medical professional can covertly send home a sperm-banking kit with clear instructions for gathering and returning the sample for storage.

- Users might need to deliver the semen to the fertility clinic within a few hours if users offer a semen sample at home. To maintain the health of a sperm, users might also need to maintain it as close to your body temperature as you can.
- This information assures accurate identification and confidentiality at the time of storage, during storage, and at the time of release. The fertility clinic may duplicate the photo ID for their permanent file as an additional safety step.
- A little sample of the semen will be taken by the healthcare provider for testing. The remaining portion of the sample will be divided into smaller portions, treated with a special substance called a cryopreservative to safeguard the sperm after freezing, and kept in cryovials, which are specialised storage containers.

- The freezing process begins immediately. The samples will be put in a freezer that is set to -20 degrees Fahrenheit by the doctor (-29 degrees Celsius). By taking this action, users can save the sperm from expiring due to a sudden drop in temperature.
- After that, for around two hours, the healthcare professional will place the samples in a liquid nitrogen vapour at -86 degrees Fahrenheit (-66 degrees Celsius).
- Ultimately, the healthcare provider will keep the samples in a liquid nitrogen-filled deep-freeze storage tank for all time. There are -321 degrees Fahrenheit in the liquid nitrogen (-196 degrees Celsius).

TESTS TO BE DONE FOR SPERMS:

Before freezing the semen sample, the doctor will examine a little portion of it.

- The total amount of sperm cells will be examined.
- The overall quantity of viable sperm.
- The proportion of migrating sperm (motility).

The health care professional will examine a little amount of the frozen semen sample between 24 and 48 hours later to determine the proportion of sperm that survived the freezing procedure. Sperm from high-quality semen samples typically

recovers more readily from freezing. The healthcare professional can suggest the ideal number of semen samples to provide the greatest likelihood of pregnancy based on the test findings before and after freezing. Also, they can provide user advice on whether medical procedure is ideal for them, in vitro fertilisation or intrauterine insemination (artificial insemination).

ADVANTAGES OF SPERM BANK:

• **Fertility.** Male infertility may be brought on by medical interventions, biological, or environmental reasons. Maintaining your fertility with the support of healthy sperm banking provides you the freedom to conceive biological children should their circumstances alter.

• **Safety and health.** The risk of congenital disorders is not increased by using cryopreserved sperm (conditions present at birth). Cryopreserved sperm can be used to conceive children who are as healthy as those born via sexual activity.

• **Longevity.** Semen samples kept properly don't degrade even after several years in deep freezing.

COMPLICATIONS OF SPERM BANKING:

1.Ejaculation failure

Erectile dysfunction (ED), delayed ejaculation, an ejaculatory incapacity, and other symptoms caused by certain disorders can make it challenging or impossible to collect a high-quality semen sample by masturbation.

The doctor can advise surgically removing the sperm cells if men are unable to produce a sample of semen through masturbation. Surgery for sperm retrieval includes:

- Microscopic testicular sperm extraction (micro TESE).
- Needle aspiration biopsy (NAB).
- Percutaneous epididymal sperm aspiration (PESA).

2.Cost

Cryopreserving a single semen sample typically costs around $1,000. It typically costs $300 per year to store each sample of semen. It's a good idea to ask the insurance company if the costs of sperm banking are covered.

3.Inherited disorders

Users could be concerned about the wellbeing of their biological children if you want to bank their sperm because you have cancer. Certain cancers have a tendency to run in families. If the cancer is one of those forms, the healthcare provider can tell this. A genetic counsellor should be consulted if you have a hereditary disease or cancer that runs in the family. Healthcare professionals with specialised training in informing patients about the hazards of an inherited condition are known as genetic counsellors.[6]

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Evaluate the Effectiveness of Planned Teaching Programme on Knowledge Regarding Impact of Tobacco use Among Adolescents in Selected Pu Colleges at Nagamangala (Tq) Mandya (District)

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A B S T R A C T

Tobacco smoking is most popular form of smoking, practiced by over one billion people leading to health problems. Nurses have an important role in prevention of smoking by conducting educative programmes on ill effects of smoking in Colleges, and also in hospitals. This study attempts to evaluate the effectiveness of planned teaching program on knowledge regarding impact of tobacco use among Adolescents in selected P U college at Nagamangala (tq) Mandya (district).

Keywords: P U College students; planned teaching program; Impact of tobacco use.

Introduction

Health is a wealth and wonderful gift given by GOD. It's our duty to preserve it to lead a healthy life. Good health is a priceless asset. But some people, for seeking temporary pleasure fall into bad habits such as chewing tobacco. The personal decisions on behavior affect the prospects for good health and that ill health is not solely a consequence of illume but frequently a direct consequence of behavior under individual's control.[1]

Tobacco consumption is preventable cause of death in the world. The negative impacts of tobacco use on the human body are more. it increases the risks for cancers at 13 sites, particularly the lung, and for heart disease, stroke, and chronic obstructive pulmonary disease. Combusted tobacco products kill up to one-half or more of all people who use them, on average 15 years prematurely. Today, tobacco use causes 12% of deaths among adults worldwide, representing almost 6 million people a year. Yet, tobacco products continue to be among the most widely consumed products globally. Unless tobacco use is markedly reduced, it has been estimated that 1 billion people worldwide will have died as a result of using tobacco products by the end of the twenty-first century. Manufactured cigarettes are the predominant form of tobacco used worldwide. In 2016, manufactured cigarettes accounted for 95% of total smoked tobacco sales, with cigars and other smoked tobacco such as roll-your-own cigarettes, pipes, bidis, and kreteks accounting for the remainder. Various forms of oral smokeless tobacco are common in Southeast Asia and the Middle East and regionally are popular in parts of Europe , as well as the United States.[2]

The Portuguese introduced tobacco to India 400 years ago and established the tradition of tobacco trader in their colony of Goa. 200 years later, the British introduced commercially produced cigarettes in India.4 the United States Surgeon General Report 1988 reported that cigarette as well as other forms of tobacco are addicting. The pharmacological and behavioral processes that determine tobacco addiction is similar to those processes determine addiction to drugs like heroin and cocaine.5 before it was established that nicotine was psychoactive drug; tobacco dependence was not fully recognized as a substance abuse disorder. In 1980, however the APA in its DSM of mental disorders included tobacco dependence as a substance abuse disorder. Subsequently this classification was developed and strengthened. In the WHO'S ICD (10th version 1990) tobacco is dealt within the section entitled mental and behavioral disorders due to psychoactive substance use.6 Drug addiction is neither delinquency nor deviancy, but it is a disease worse than cancer. It is a 4 disease because it affects physical health, mental health, prestige, finance, social status and occupation of the individual. [3]

James "Buck" Duke formed the American Tobacco Company in the US (1889). Utilizing Virginia inventor James Bonsack's cigarette rolling machine, he made 200 cigarettes a minute. Within five years one billion cigarettes were produced. The sale of Duke's cigarettes exploded, leading the way to the production of 30 cigarettes a second and the sales of approximately six trillion cigarettes worldwide in 2014 . As this century progresses, we are seeing the tobacco industry expand their sale of cigarettes into Asia, the Middle East and Africa as the market in developed countries shrinks, and as a global health treaty (FCTC), has been introduced to reduce tobacco related diseases.[4]

There is an acknowledgment amongst health care professionals that working with tobacco and nicotine using patients to quit their addiction is one of the most difficult tasks they are asked to perform. The obligation and duty of a healthcare provider is to prevent disease, thus we ideally should be speaking

to parents and their children about the dangers of tobacco use as early as is feasible as most smokers begin using cigarettes between the ages of 10-13. This is especially true given the viral rise in the number of young people vaping. In addition, "Secondhand smoke exposure causes disease and premature death in children who do not smoke. Children exposed to second hand smoke are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.[5]

Among young smokers. The smokers are also at great risk of many other nonfatal diseases, including osteoporosis, periodontal disease, impotence, male infertility, and cataract. Smoking in pregnancy is associated with increased risk for reduced birth weight for gestational age. Tobacco is not just a simple health issue, but involves economics, environment, big business, politics, family relations, trade and crimes such as smuggling, litigation and deceit. [6]

OBJECTIVES

1. To assess the pretest level of knowledge among adolescents on impact of tobacco use in selected PU colleges.
2. To evaluate effectiveness of planned teaching program on knowledge regarding impact of tobacco use among adolescents in selected PU colleges
3. To assess the posttest level of knowledge among adolescents on impact of tobacco use in selected PU colleges.
4. To find association between pretest knowledge scores with selected demographic variables

METHODS

The study involved one group pre-test and post-test without a control group using pre-experimental design, with non-probability sampling technique in which purposive sampling method was used. 60 Government P U College, Bellur , Nagamangala (TQ) Mandya (D) students were made to mark the planned questionnaire followed by implementation of PTP and post- test conducted after 8 days, using the same planned questionnaire to find out the effectiveness.

MAJOR FINDINGS OF THE STUDY

Maximum 59 (98%) adolescents in selected P U colleges at Nagamangala (TQ) were the age between 16- 18 years and 1 (2%) adolescent in selected P U colleges at Nagamangala (TQ) were the age between 18- 19 years. Maximum 22 (37%)adolescents in selected P U colleges at Nagamangala (TQ) are Male and 38 (63%) adolescents are Female. 39 (65%) adolescents in selected P U colleges at Nagamangala (TQ) were Hindu 4 (7%) adolescents are christian , 15(25%) adolescents are muslim and 2(3%) adolescents are other religion. 36 (60%) adolescents in selected colleges at Bangalore were from nuclear family 24 (40%)adolescents from Joint family . 42 (70%) adolescents in selected colleges at Bangalore were from of rural area, 18 adolescents from urban area. 7 (%) adolescents' father's educational status is illiterate , 37 adolescents father's educational status is primary 10 adolescents father's educational status is secondary school , and 6 adolescents father's educational status is graduate. 12(%) adolescents' mother's educational status is illiterate , 37 adolescents mother's educational status is primary 9 adolescents mother's educational status is secondary school , and 2 adolescents mother's educational status is graduate.; 10 (%) adolescents fathers occupation are unemployed , 36 (%) adolescents fathers occupation are daily wage earner, 11 (%) adolescents fathers occupation are self employed, and 3 (%) adolescents fathers occupation are Government; 26 (%) adolescents mother's occupation are unemployed , 25 (%) adolescents mother's occupation are daily wage earner, 9 (%) adolescents mother's occupation are self employed ; 44(%) adolescents in selected P U colleges at Nagamangala (TQ) were having the family monthly income of Rs.below 20000/- , 15 adolescents were having the family monthly income of 20000- 45000, 1 adolescent were having the family monthly income of above 1 lakh ; 17 (%) adolescents in selected P U colleges at Nagamangala (TQ) were having the family history of smoking and 43 adolescents not having family history of smoking; 12(%) adolescents in selected selected P U colleges at Nagamangala (TQ) got information regarding ill effects of tobacco use from health team members, 6 adolescents got information regarding ill effects of tobacco use from parents/ friends/ relatives, 6 adolescents got information regarding ill effects of tobacco use from social media and 36 adolescents does not got information regarding ill effects of tobacco use; 52 % had inadequate knowledge, 45% had moderate knowledge where as in post test 2% of the samples reached moderate knowledge 98% of the samples reached adequate knowledge. This shows an improvement in knowledge level after planned teaching programme.

INTERPRETATION AND CONCLUSION

In this study the Calculated 't' value 3.77 is higher than the tabulated 't' value of 1.671. So the H1 hypothesis accepted. The researcher concluded the teaching was effective. There is a significant association between post test knowledge level and the socio demographic variables such as sex, religion fathers education status, fathers occupation, mothers occupation, family history of tobacco use, source of information regarding impact of tobacco use, as the chi-square value is higher than the table value at 0.05 level of significance. Therefore, it accepts the H2 hypothesis.

The overall findings of the study clearly showed that the PTP was significantly effective in improving the knowledge scores of P U College students regarding Impact of tobacco use.

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Review an Article on the Impact of Mass Media on Tobacco Use Among Youths

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ABSTRACT:

This article deals with impact of mass media on tobacco use in youths and shows the prevalence rate , risk factors , This study provides awareness about How mass media affect attitudes and behavioral intentions ,Influence of mass media on tobacco use. As it is evident that success of mass media-based tobacco cessation intervention trials is highlighted in this review. We propose integrating tobacco cessation therapies within current well-liked mass media platforms because to the widespread use of mass media and its inexpensive cost. Youths are more likely to use e-cigarettes if they use mass media more frequently and are exposed to more marketing and e-cigarette-related content in social media posts. To prevent sponsored e-cigarette content on youth-used mass media platforms, legislation is required.

INTRODUCTION

Smoking tobacco with a waterpipe, also known as a nargileh, hookah, or shisha, is customary in the Middle East and South Asia, yet its prevalence among Middle Eastern populations in Western countries and among school and university students there is disturbingly high [1]. According to national data, 2.6% of youths in the US are currently using waterpipes, compared to 7.6% of high school students in London who smoke cigarettes [2] and 3.4% of whom smoke waterpipes [3]. Internet users frequently access mass media as a means of communication and as a source of information, including health-related information[4]. It has been demonstrated to appeal to a large audience, but its use in public health advocacy is still relatively new. Significantly, , it can be a potent instrument for the tobacco industry's promotion [5], but we are yet unsure of the most effective ways to employ social media campaigns for the aim of prevention [6].

PREVALENCE

With one fatality from tobacco use every six seconds and 10% of all adult fatalities, tobacco use is the biggest global cause of preventable mortality [7]. Eighty percent of the world's one billion smokers reside in low- and middle-income nations [7]. A middle-income nation in South America, Argentina has a tobacco smoking prevalence of 27.1% [8]. In 2002, the tobacco business in Argentina invested over $18 million in marketing and advertising. The World Health Organization (WHO) Framework Convention on Tobacco Control was signed by the president of Argentina in 2003; however, ratification has not yet occurred due to active lobbying by regional legislators from tobacco-growing provinces who have been swayed by tobacco industry positions [9]. One of the most popular forms of communication in the world today is the Internet. Despite the fact that many nations have banned the advertisement of dangerous goods like tobacco, internet-based marketing has the potential to circumvent these regulations [10] while still reaching a sizable audience. As a result, advertising on the internet has grown in popularity as a method of promoting tobacco goods, and the use of social networking and user-generated content websites is rising. More than 500 Facebook pages with links to BAT goods were found in a 2010 investigation [11]. Numerous pro-tobacco films were found, according to studies that examined the smoking-related content on the website YouTube [12,13], which is consistent with indirect marketing activity by tobacco corporations or their agents [12]. Nearly 5 million houses in Argentina have broadband Internet access, which means that at least 55% of the population has access [14,15]. Numerous cigarette companies have created websites for the regional market that, whenever possible, encourage user engagement and focus on particular goods. For instance, it is common for a person who is exposed to a marketing promotion to be asked to go online in order to enter a lottery or to receive a gift, and similar advertisements are frequently found in cigarette packaging. Depending on the website, users can contribute brand marketing ideas and take part in marketing campaigns with content that may include online games and chatting. RJ Reynolds, for instance, created a plan that allowed users to critique the packaging for four different cigarette flavours on the mass media[16]

RISK FACTORS

Findings show that exposure to tobacco-related social media is a significant risk factor for young people's usage of cigarettes in the future. Federal regulation, anti-marketing, and health communication initiatives should concentrate on social media.[17]

Teenagers who use social media frequently may use e-cigarettes more frequently. Even a brief exposure to social media e-cigarette information was linked to increased use intention and more favourable attitudes regarding e-cigarettes. Regulations should be implemented to forbid sponsored e-cigarette content on young people's favourite social media platforms, including updates from youth-oriented influencers.[18]

Social media usage, including publishing and viewing tobacco-related information, is a countrywide predictor of youth tobacco use. The findings imply that in order to reduce social media's influence on juvenile tobacco usage, interventions and laws banning tobacco-related content on social media are required.[19]

EFFECTS OF SOCIAL MEDIA ON ATTITUDES AND BEHAVIOR REGARDING TOBACCO USE

The IPI model offers a theoretical framework for comprehending how public opinions and behaviors' regarding a certain problem are influenced by social media. According to the paradigm, a person may observe how media influences other people and change their own attitudes and behaviours to reflect that impression (Gunther & Storey, 2003). Three causal links between the essential elements that explain the mechanism of media influence are identified by the IPI model.[20]

The affiliation is the initial kind of relationship.

Speculative model

This study investigates the direct and indirect impacts of smoking-related messaging on social media on smoking attitudes and intentions among college students, guided by the theoretical underpinnings of the IPI model. The current study integrates two social media communication behaviors—message expression and reception—as well as two major categories of smoking-related messages—against and in favour of smoking—into the hypothesised model to more thoroughly examine these impacts.[20]

ADVANTAGES OF MASS MEDIA ON TOBACCO USE

• Decreased Youth Smoking; • Decreased Tobacco Users; • Increased Quit Rates

Other potential positive effects include decreased cigarette usage and increased utilisation of cessation therapies. [21]

MASS MEDIA'S IMPACT ON TOBACCO USE

Participants described how certain Facebook pages and quick YouTube videos helped them become fascinated with smoking. Numerous interviewees claimed that their attitudes toward smoking were impacted by the smoking habits of well-known male protagonists and even antagonists who were portrayed on social media. A participant said: Some images and videos from the television programme "Narcos" were uploaded on Facebook. Pablo Escobar was the primary character and my favourite. He was a drug dealer and "Godfather" figure who led a group of criminals and had a distinctive smoking habit. I repeatedly mimicked that scene since I found it to be so fascinating. [22]

An individual who mostly viewed YouTube every day said:

On one occasion, I was watching the Satyajit Ray-helmed film "Agantuk" on YouTube. When the hero was questioned about whether or not there was a god, he lit his pipe, put some tobacco in it, and took a puff. I really enjoyed this scene.[22]

Another person attributed the beginning of their smoking habit to social media: When I first started using Facebook, I observed many beautiful photographs of smokers exhaling smoke in various styles, including smoke rings, and it was at that point that I first became attracted to and began smoking.[22]

This participant added that he continued using Facebook primarily because of these initial photographs of smokers because he wanted to hunt for additional pictures that were similar to them. These remarks and others like them can be analysed to indicate how tobacco portrayals on websites like Facebook and YouTube attracted students with appealing images of smoking, often utilising a likeable main character to demonstrate how "cool" smoking is. Imitation—students modelling their smoking habits after celebrities they identified with on social media—was another recurring theme. These and other quotes serve to clarify how social media can affect this age group's smoking behaviour.[22]

CONCLUSION

Social media has emerged as one of the most important platforms for debate and communication on public health concerns, including discussions around tobacco use. This study lends support to the idea that social media serve as a conduit for college students to create, distribute, receive, and discuss content

connected to smoking. More crucially, mass media can improve one-on-one conversations by enabling one-to-many or many-to-many connection. Regardless of accommodations or location, college students can connect with one another regarding smoking-related concerns like smoking habits, actions, and attitudes through social media.[23]

The success of mass media-based tobacco cessation intervention trials is highlighted in this review. We propose integrating tobacco cessation therapies within current well-liked mass media platforms because to the widespread use of mass media and its inexpensive cost.

Teenagers are more likely to use e-cigarettes if they use mass media more frequently and are exposed to more marketing and e-cigarette-related content in social media posts. To prevent sponsored e-cigarette content on youth-used mass media platforms, legislation is required.

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A REVIEW ARTICLE ON PULMONARY HYGIENE FOR COVID-19 RECOVERED PATIENTS

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Abstract:

Pulmonary hygiene previously known as pulmonary toilet refers to exercises and procedures that help to clear the airways of mucous and other secretions. This ensures that lungs get enough oxygen and respiratory system works efficiently. Types of pulmonary hygiene that treatment plan for conditions affects breathing abilities including: COPD, Asthma, Bronchitis, Cystic Fibrosis, Pneumonia, Emphysema, Muscular Dystrophy. Diagnostic evaluation is Spirometry, Percussion, Vibration, Postural drainage. Methods used as Deep breathing, lung exercise and tapping on the chest are a few of the techniques during a pulmonary hygiene session are controlled coughing as one of the most effective means of airway clearance in lung disease. Treatment are Breathing exercises, Relaxed breathing, Huffing, Suction pulmonary is the bottom line of benefits for the respiratory issues. Rehabilitation, alternatives to pulmonary hygiene, Expectorant and Mucolytic are used. Conclusion: methods used for pulmonary hygiene include suction of airways, chest physiotherapy, blow bottles and nasotracheal suction and chest physiotherapy, percussion and vibration, cardiopulmonary reconditioning (rehabilitation), respiratory muscle training, breathing exercises and incentive spirometer intervention. Study conducted to describe and discuss the available evidence about pulmonary rehabilitation. Coronavirus is more common relative to SARS, which ended in fatalities. Covid – 19 effects on the respiratory system including the neuromuscular breathing approaches the conducting airway, the respiratory airway, and alveoli. Prevalence of COPD, Asthma was 75% & 20.0%. Effect of

Covid-19 on human respiratory system as a group of pneumonia caese, about 80% of individuals manifested, pulmonary hygiene plays role with the people suffering from respiratory hygiene can prevent and reduce the risk of breathing difficulties.

Key words: Pulmonary hygiene, Coronavirus, Covid – 19, pulmonary toilet, Spirometry.

INTRODUCTION

Pulmonary Hygiene:

The fundamental goals of pulmonary hygiene are clearance of secretions and prevention and relief of atelectasis. The most effective method of clearing secretions is a combination of changing body position and vigorous coughing by the patient. When the patient is unable to cough effectively, it is common practice to resort to chest physiotherapy and active suctioning of the trachea. Suctioning the trachea usually requires disconnecting the patient from the ventilator, passage of a suction catheter into the endotracheal tube, and application of suction to the catheter while the catheter is withdrawn from the endotracheal tube. In patients with marginal oxygenation, suctioning may result in hypoxia; arrhythmias; hemodynamic instability; and, in rare instances, cardiac arrest.

DEFINITION

Pulmonary hygiene, previously known as pulmonary toilet, refers to exercises and procedures that help to clear your airways of mucus and other secretions. This ensures that your lungs get enough oxygen and your respiratory system works efficiently.

TYPES

Pulmonary hygiene can be part of a treatment plan for any condition that affects your breathing abilities, including: Chronic Obstructive Pulmonary Disease (COPD), Asthma, Bronchitis, Cystic Fibrosis, Pneumonia, Emphysema, Muscular Dystrophy.

METHODS

Deep breathing, lung exercises, and tapping on the chest are a few of the techniques that fall under what's known as pulmonary hygiene. These strategies are used in people with chronic conditions like chronic obstructive pulmonary disease (COPD), cystic fibrosis, and bronchiectasis to help remove mucus build-up from blocking the lungs.1 There is inconclusive evidence about the benefits of pulmonary hygiene, but many people feel an improvement in symptoms with this treatment. Pulmonary hygiene may be particularly useful when such illnesses are complicated by infections, such as pneumonia, which increase mucous secretions. You may have portions of your treatment performed by a physical therapist or a respiratory therapist. You can also learn how to perform some pulmonary hygiene methods at home, though you may need assistance from family

members or other caregivers in some cases. Also Known As Pulmonary hygiene is also sometimes called broncho-pulmonary hygiene or pulmonary toilet.

Pulmonary Hygiene Methods

There are several facets of pulmonary hygiene. They all entail the use of physical manipulation techniques to help you cough up sticky mucus. The therapist may use any combination of techniques during a pulmonary hygiene session.

Controlled Coughing

Controlled coughing is one of the most effective means of airway clearance in lung disease. Therapist or nurse can show you the proper way to sit and how to cough to make it productive.

Deep Breathing

Deep breathing is as simple as it sounds: Breathe in deeply and then attempt to cough up mucus and secretions. A physical therapist should be able to instruct the most effective breathing techniques for your condition.

DIAGNOSTIC EVALUATIONS

- **Spirometry**

This method of strengthening and controlling your breathing uses a device called an incentive spirometer. It's a clear, hollow cylinder with a flexible tube attached to it. At the other end of the tube is a mouthpiece through which you'll exhale and inhale.

As exhale, a tiny ball or other indicator goes up and down inside the spirometer, depending on how much you can exhale. The device also includes a gauge to measure how slowly you exhale. Your healthcare provider will explain how to use the device properly. Spirometry is recommended for people recovering from surgery or who have a respiratory condition, such as pneumonia. Usually do it at home while sitting in a chair or on the edge of your bed.

Generally, the steps are as follows:

- Hold the incentive spirometer in to hand.
- Place the mouthpiece in to mouth and wrap your lips tightly around it.
- Breathe in slowly and deeply.
- Hold breath for as long as to can.
- Exhale slowly.

After each run-through, take a moment to collect your breath and relax. Likely be advised to do this roughly 10 times per hour.

- **Percussion**

Percussion, also called cupping or clapping, is a type of pulmonary hygiene method you can usually do at home, though you'll need someone to assist you. You'll also want to get clear instructions from your healthcare provider first about what to do. Generally, percussion is done by striking the chest or back with cupped hands, making sure all parts of both lungs are covered. This repeated contact helps to break up thick secretions in the lungs. If you're very frail or have experienced heart problems or rib injuries, this might not be the best pulmonary hygiene method.

- **Vibration**

Vibration is similar to percussion. However, instead of cupped hands, the palms are flatter. The person performing the procedure keeps one arm straight, with the palm of that hand on your chest or back. They'll place their other hand on top, rapidly moving it side to side to create a vibration. This method helps to loosen secretions in the lungs.

- **Postural drainage**

Postural drainage relies on gravity to help you clear your airways. It's especially helpful in the morning for clearing secretions that have built up overnight. Sometimes, it's combined with other pulmonary hygiene methods, such as breathing exercises or vibration. There are many positions you can use to do postural drainage, depending on the area that needs clearing. To help clear secretions from your lower lungs, for example, lie on your back with pillows under your hips. Learn more about postural drainage, including specific positions you can try.

Benefits

While this type of therapy has been used for many years, experts have not been able to definitively verify its long-term benefits. Pulmonary hygiene is believed to help prevent atelectasis, a harmful effect of lung disease in which the alveoli (tiny air sacs in your lungs) collapse, making it difficult to breathe.

If you've been hospitalized with COPD, it's possible that pulmonary hygiene can help lessen your need for a mechanical respirator, and it may also reduce the length of your hospital stay. However, it doesn't appear to reduce the number of COPD exacerbations, nor does it reduce the number of COPD-related hospitalizations.

Pulmonary hygiene is only one of several ways of preventing atelectasis. Other physical methods and prescription medications can help as well.

DIAGNOSTIC EVALUATIONS:

Breathing Exercises That Help with Lung Disease

Incentive Spirometry

An incentive spirometer is a medical device that you can use to exercise your lungs. As you blow into the device, it measures how much air you are breathing out. This measurement can be used as a benchmark for you to exercise your lungs.

Chest Percussion

If the chest percussion, therapist will tap on chest repeatedly or do so with a mechanical device. The resulting vibration may help break up thick mucus that is trapped in your lungs so that you can expel it more easily.

Chest Vest

Chest vests, also called high-frequency chest wall oscillation (HFCWO) devices, are worn to help loosen mucus and clear the airway. The vest vibrates and is either plugged in or run on a battery. Coughing is done throughout the session and afterward to expel mucus.

TREATMENT

Breathing exercises

Breathing exercises can help you in several ways, from relaxing your airways after a coughing fit to clearing them without the need for a big cough. Here are two breathing exercises that can help you clear your airways:

Relaxed breathing

To practice relaxed breathing, do the following:

Relax your neck and shoulders.

Place one hand on your stomach.

Exhale as slowly as you can through your mouth.

Breathe in slowly and deeply, making sure to keep your shoulders down and relaxed.

Repeat these steps four or five times a day.

Huffing

This exercise requires you to “huff” by breathing hard out of your mouth, as though you were creating fog on a mirror.

Use with it two ways:

Inhale as you usually would, then push your breath out as hard.

Take a deep breath and exhale with short, sharp breaths.

Suction

Suctioning involves the use of a thin, flexible tube called a suction catheter. At one end, the catheter is attached to a device that pulls air through the tube. The other end is placed into your airway to remove secretions. This can be uncomfortable, but it only takes about 10 to 15 seconds to do. If you need more than one session at a time, you'll get a break in between each one. The catheter will usually be removed and discarded after each procedure.

How to try it safely

When done properly, pulmonary hygiene methods are generally safe, though they can be a little uncomfortable at times. If you want to try a pulmonary hygiene method at home, make sure your healthcare provider shows you exactly how to do it first. This will help to ensure that the method you're using is as safe and effective as possible. It might help to bring a close friend or family member with to the appointment so they can learn how to help. Pulmonary hygiene can be a useful part of your treatment plan, but make sure to keep up with any other treatments prescribed by healthcare provider.

The bottom line

Pulmonary hygiene can offer a range of benefits if you have respiratory issues. You may have to try a few different methods to find which ones work best for you. If you're unsure about a method of pulmonary hygiene, ask your healthcare provider for advice.[2]

REHABILITATION

Alternatives to Pulmonary Hygiene

Pulmonary hygiene techniques are considered safe, and many people who have lung disease feel a sense of improvement with this therapeutic approach. Yet, you may feel that pulmonary hygiene is inadequate for managing your symptoms, or you might find it inconvenient or physically uncomfortable.

In addition to or instead of pulmonary hygiene, there are other methods that can be used to decrease or thin your respiratory mucus. Speak to your healthcare provider about:

- Expectorants: Expectorants are medications that are used to thin and loosen airway mucus. These medications may actually make you cough more. In this case, that's a good thing, as these drugs are intended to make your cough more productive.
- Mucolytics: Mucolytic medications are used to thin thick lung secretions. These medications may reduce the frequency of respiratory exacerbations.

It can be difficult to predict whether this approach will be right for you unless you try it. Overall, the most effective management of respiratory disease includes a wide range of approaches—ranging from medications to lifestyle changes.

Pulmonary toilet also called pulmonary hygiene, is a set of method used to clear mucus and secretions from the airways. The word pulmonary refers to the lungs. The word toilet is related to French toilet, refers to the body care and hygiene, this root is used in words such as toiletry that also relate to cleansing**.**

Pulmonary hygiene can be part of a treatment plan for any condition that affects your breathing abilities including chronic obstructive pulmonary disease, asthma, bronchitis, cystic fibrosis, pneumonia, emphysema, muscular dystrophy. Pulmonary hygiene method methods and how to get the most out of them. Breathing exercise, relaxed breathing, huffing, suction, spirometry, percussion, vibration, postural drainage, the bottom line, breath deeper to improve health and posture.

Methods used for pulmonary hygiene include suction of airways, chest physiotherapy, blow bottles and nasotracheal suction. Bronchoscope, in which a tube is inserted into the so that an examiner can view them, can be used 6 therapeutically as part of pulmonary hygiene. Incentive spirometry and use of analgesic that do not inhibit breathing are also part of pulmonary toilet. Coughing is also important for ridding the airways of secretion so health care providers are careful not to overdose patient. Because that could inhibit coughing. Tracheotomy facilitates pulmonary toilet. Percussion another method, loosen secretion and allows the cilia of the airways to remove material.

Position and chest physiotherapy, percussion and vibration, cardiopulmonary reconditioning (rehabilitation), respiratory muscle training, breathing exercises and incentive spirometer are the intervention for pulmonary hygiene.

Pulmonary hygiene previously known as pulmonary toilet, refers to exercises and procedures that help to clear patients' airways of mucous and other secretions. This is the part of treatment plan for any condition that affects your breathing abilities including: COPD, asthma, bronchitis, cystic fibrosis, pneumonia, emphysema, muscular dystrophy. Some of the methods of pulmonary hygiene to get out of them are breathing exercises, huffing, suctioning, spirometer, percussion, vibration, postural drainage. In support of the above statement a study was conducted by Yesmin kurthari assess the knowledge regarding the pulmonary hygiene or pulmonary rehabilitation in covid-19 patient, long – term oxygen therapy, utilization of non- invasive and invasive mechanical ventilation.

This study conducted to describe and discuss the available evidence about different modalities of physical therapy treatment and pulmonary rehabilitation (PR) involving exercise training in patients with chronic obstructive pulmonary disease (COPD), asthma, bronchiectasis and interstitial lung disease (ILD). PR involving exercise training was effective in improving exercise capacity, muscle force, quality of life and

reducing symptoms in patients with COPD and asthma, there are exercise training in patients with bronchiectasis, improvement in exercise capacity and quality of life in those patients was also observed. Patients with ILD also respond to exercise training and Non-exercise-based interventions, such as bronchial hygiene techniques and inspiratory muscle training, also present positive results when applied to patients with COPD, asthma and bronchiectasis. In some cases, it is recommended that these interventions are combined with exercise training.

Prospective study conducted to determine the effectiveness of a multidisciplinary, outpatient pulmonary rehabilitation (PR) program in patients with severe and very severe chronic obstructive pulmonary disease (COPD). PR is recommended in advanced COPD, but there is limited evidence on the effectiveness of PR in reducing health care resources when applied in outpatients. A prospective research design and setting in outpatient department. 82 consecutive patients with advanced COPD and finally studied 72 patients who completed the PR intensive phase. The effectiveness of this PR program was assessed by comparing health resources use from the year before and the year after PR. Clinical variables including dyspnea, the body mass index, obstruction, dyspnea, exercise capacity (BODE) index; and the Chronic Respiratory Questionnaire and health resources use including the number of exacerbations, the number of hospitalizations, and days of hospitalization. The study concluded that conclude that a multidisciplinary, outpatient PR program substantially reduces health resources use in patients with severe and very severe COPD.

People need to breath for survive and the body cell need a continuous supply of oxygen for the metabolic process that are necessary to life. Respiration is result in the exchange of oxygen and carbon dioxide between the atmosphere and the body cells. Every 3 to 5 seconds nerve impulses stimulate the breathing process or ventilation, exchange of gases between the lungs and blood as external respiration and internal respiration. Pulmonary ventilation is commonly referred as breathing, this involves three different pressures are atmospheric pressure, intra alveolar pressure and intra pleural pressure. During inspiration the diaphragm contract and the thoracic cavity increase the volume. Pulmonary ventilation is the process of air flow into the lungs during inspiration and out during expiration. Pulmonary breathing depends on age, sex, body build and physical conditioning have an influence on lung volumes and capacities. The conducting passages are divided into the upper respiratory tract and lower respiratory tract. The lower respiratory tract consists of the trachea, bronchial tree and lungs, these tracts open to the outside and are lined with mucous membrane. Pulmonary rehabilitation is a core aspect of medical rehabilitation. The fundamentals tools and interventions of pulmonary rehabilitation are extremely important new role and application in the treatment of COVID-19.

Corona virus is more common relative to SARS, which ended in more overall fatalities, lower case fatality rate, then even higher case fatality rate in older ages and poorer results for males and now a day' word wide lung disorder and need a preventive measure. It is necessary to take precaution to minimize both the risk of being sick and the transmission of the disease. WHO advice, wear a mask (N95), wash hands regularly with alcohol-based hand washCOVD-19or soap and water, preserve contact (at least 1m / 3 feet) between two persons and some who sneeze or cough, preferably with your heart beat elbow or finger and try to find early

medical attention if you have fatigue, cough and trouble breathing, and take preventive precautions if you are in or have recently go to places where corona virus spreads.

COVID-19 effects son the respiratory system including the neuromuscular breathing approaches the conducting airways, the respiratory airways and alveoli, the 4 pulmonary vascular endothelium and pulmonary blood flow. This review summarizes much of the known date on covid-19 induced disorder of the respiratory system, offering researchers and clinician an early and rough sketch that comfort for the recovered patient or general people.

Prevalence of COPD and Asthma were responsible 75.6% and 20.0% of the chronic respiratory disease DALYs, respectively, in India in 2016. The number of cases of COPD in India increased from 28.1 million (27.0-29.2) in 1990 to 55.3 million (53.1-57.6) in 2016, an Increase prevalence from 3.3% (3.1-3.4) to 4.2% (4.0- 4.4).

Impact of lung disorder in India is the chronic obstructive pulmonary disease (COPD) was the second highest cause of death in India after heart disease in2017, killing 1million (958,000) Indians that year, according to University of Washington's global burden of disease study.

Effect of covid-19 on human respiratory system as a group of pneumonia cases brought about another corona virus which incorporates the lungs and cause breathing issues this begins in one piece of lungs and spread. About 80% of individuals who have covid-19 get gentle to direct manifestations and dry hacks or an irritated throat. It's a serious pneumonia or intense respiratory trouble condition.

Pulmonary rehabilitation is playing an important role with the people whose through suffering from respiratory disorder and recovered from pulmonary disorder like COPD, asthma and bronchitis and it's a service that improve respiratory disease. It carried out depending on patient's condition. Pulmonary rehabilitation aim is to reduce symptoms improve knowledge of lung condition, promote self-management increase the peripheral and respiratory muscle strength and managing anxiety and 5 depression, reduction in number of exacerbation in patient who performed daily exercise. In medical condition it help in the disease condition as improve ventilator exchange of gases, cardiac function. Improve skeletal muscle dysfunction in COPD. And contraindicated in some condition like unstable cardiovascular disease, neurological condition.

Decreased vital lung capacity leads to lung disorder and decrease vital lung capacity also cause for primary and secondary cause for smoking also. By performing method of used for pulmonary hygiene include chest physiotherapy, incentive spirometer coughing exercise and vibration, pursued lip diaphragmatic breathing.

Ethical clearance- This article is a purely a narrative review article hence it is not required an ethical clearance.

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Review Article

A Panaromic Review Article on Effect of Therapeutic Plasma Exchange During COVID-19 Associated Pneumonia

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ABSTRACT

TPE is a procedure in which the patient's blood is passed through an apheresis machine, where the filtered plasma is removed and discarded with reinfusion of red blood cells along with replacement fluid such as plasma oralbumin in to the patient.TPEis a procedure in which the patient's blood is passed through an apheresis machine, where the filtered plasma is removed and discarded with reinfusion of red blood cells along with replacement fluid such as plasma or albumin in to the patient.Therapeutic plasma exchange showed significant effect on mortality (RR 0.41, 95% CI 0.24 to 0.69; P = 0.0008). Conclusion: TPE significantly reduced mortality in hospitalized patients with moderate-to-critical COVID-19. Plasma exchange therapy should be considered for patients with COVID-19. Areviewto assess the effect of TPE on the risk of mortality in patients with COVID-19-associated pneumonia, using three statistical procedures to rule out any threats to validity.Results Deaths were 6 (14%) in Group 2 and 14 (47%) in Group 1. However, different harmful risk factors prevailed among patients not receiving TPE rather than being equally split between the intervention and control groupA review article on to evaluate the safety of TPE in adult patients with serious/life-threatening COVID-19 requiring ICU admission, and associated 28-day mortality.

Keywords: Pneumonia,Plasma Volume Calculator,Thrombus Inflammation.

INTRODUCTION

Therapeutic Plasma Exchange is a procedure in which the patient's blood is passed through an apheresis machine, where the filtered plasma is removed and discarded with reinfusion of red blood cells along with replacement fluid such as plasma oralbumin in to the patient. The exchange of large volumes of plasma may cause shifts of fluid that can lead to changes in blood pressure, cold hands and feet or breathlessness. Possible side effects during the treatment include dizziness, nausea or a feeling of cold.[1,2,3]

ADVANTAGES OF TPE

Therapeutic plasma exchange showed significant effect on mortality (RR 0.41, 95% CI 0.24 to 0.69; P = 0.0008). Conclusion: TPE significantly reduced mortality in hospitalized patients with moderate-to-critical

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COVID-19. Plasma exchange therapy should be considered for patients with COVID-19.[4]

DISADVANTAGES OF TPE

The exchange of large volumes of plasma may cause shifts of fluid that can lead to changes in blood pressure, cold hands and feet or breathlessness. Possible side effects during the treatment include dizziness, nausea or a feeling of cold.[5]

PLASMA VOLUME CALCULATOR

To calculate blood plasma volume (PV), need the values of **hematocrit (Hct)** and **total blood volume (TBV)**:

$$PV = TBV \times (1-Hct)$$

The plasma volume calculation is usually performed on the assumption that the patient's TBV is 70 mL per kg body weight for males and 65 mL per kg body weight for females.[6]

A reviewto assess the effect of TPE on the risk of mortality in patients with COVID-19-associated pneumonia, using three statistical procedures to rule out any threats to validity. Results Deaths were 6 (14%) in Group 2 and 14 (47%) in Group 1. We used an algorithm of structural equation modeling to summarize a large pool of potential confounders into a single score (called with the descriptive name "severity"). Disease severity was lower (Wilkinson rank-sum test $p < 0.001$) among patients with COVID-19 undergoing TPE (median: -2.82; range: -5.18; 7.96) as compared to those not receiving TPE (median: -1.35; range: -3.89; 8.84), confirming that treatment assignment involved a selection bias of patients according to the severity of COVID-19 at hospital admission. The adjustment for confounding was carried out using severity as the covariate in Cox regression models. The univariate hazard ratio (HR) of 0.68 (95%CI: 0.26; 1.80; $p = 0.441$) for TPE turned to 1.19 (95%CI: 0.43; 3.29; $p = 0.741$) after adjusting for severity.Conclusions In this study sample, the lower mortality observed among patients receiving TPE was due to a lower severity of COVID-19 rather than the TPE effects.[7]

A review article on to evaluate the safety of TPE in adult patients with serious/life-threatening COVID-19 requiring ICU admission, and associated 28-day mortality. Serious and life threatening COVID-19 are defined as per published literature (please, refer to the full protocol, Additional file 1). Main outcomesPrimary study end-point is 28-day mortality and safety of TPE in serious and/or life-threatening COVID-19. Safety will be evaluated by the documentation of any pertinent adverse and/or serious adverse effects related to TPE as per institutional, national and international guidelines. Secondary outcomes are: i) improvement in Sequential Organ Function Assessment (SOFA) score; ii) changes in inflammatory markers: serum C-reactive protein, lactate dehydrogenase, ferritin, d-dimers and interleukin-6; iii) days on mechanical ventilation and ICU length of stay.[8]

A review ondescribes the effect of therapeutic plasma exchange with 5% albumin as sole replacement solution for the management of Covid-19. A 74-year-old man was admitted for severe Covid-19 acute respiratory distress syndrome. Based on the growing body of evidence that cytokine release syndrome, and especially interleukin-6, plays a key role in critically ill Covid-19 patients, we decided to implement therapeutic plasma exchange as a rescue therapy. This case presents a proof-of-concept for the use of therapeutic plasma exchange with 5% albumin as sole replacement solution in a critically ill Covid-19 patient with cytokine release syndrome. Hence, we think that a further evaluation of risk-benefit balance of this therapy in severe cases of Covid-19 should rapidly be undertaken.[9]

A review COVID-19, caused by the novel coronavirus SARS-CoV-2, emerged in Wuhan, China, and has spread worldwide, resulting in over 73 million cases and more than 1 600 000 deaths as of December 2020. Although the disease is asymptomatic in most cases, some patients develop life-threatening disease characterized by acute respiratory

distress syndrome, sepsis, multisystem organ failure (MSOF), extrapulmonary manifestations, thromboembolic disease and associated cytokine release syndrome. The rationale for applying TPE early in the course of fulminant COVID-19 is the suppression of thrombusinflammation and amelioration of microangiopathy, thus preventing the ensuing MSOF. Although concerns still exist regarding its potential immunosuppressive effects and safety.[10]

A review on assessment of efficacy of therapeutic plasma exchange (TPE) following life-threatening COVID-19. This was an open-label, randomized clinical trial of ICU patients with life-threatening COVID-19 (positive RT-qPCR plus ARDS, sepsis, organ failure, hyperinflammation). Study was terminated after 87/120 patients enrolled. Standard treatment plus TPE (n = 43) versus standard treatment (n = 44), and stratified by PaO_2/FiO_2 ratio (>150 vs. ≤150), were compared. Primary outcomes were 35-day mortality and TPE safety. Secondary outcomes were association between TPE and mortality, improvement in SOFA score, change in inflammatory biomarkers, days on mechanical ventilation (MV), and ICU Eighty-seven patients [median age 49 (IQR 34-63) years; 82.8% male] were randomized (44 standard care; 43 standard cares plus TPE). Days on MV (P = 0.007) and ICU LOS (P = 0.02) were lower in the TPE group. 35-Day mortality was non-significantly lower in the TPE group (20.9% vs. 34.1%; Kaplan-Meier, P = 0.582). TPE was associated with increased lymphocytes and ADAMTS-13 activity and decreased serum lactate, lactate dehydrogenase, ferritin, d-dimers and interleukin-6. Multivariable regression analysis provided several predictors of 35-day mortality: PaO_2/FiO_2 ratio (HR, 0.98, 95% CI 0.96-1.00; P = 0.02]; ADAMTS-13 activity (HR, 0.89, 95% CI 0.82-0.98; P = 0.01); pulmonary embolism (HR, 3.57, 95% CI 1.43-8.92; P = 0.007). Post-hoc analysis revealed a significant reduction in SOFA score for TPE patients (P < 0.05). In critically-ill COVID-19 patients, addition of TPE to standard ICU therapy was associated with faster clinical recovery and no increased 35-day mortality.[11]

A review on investigated the effect of TPE on life-threatening COVID-19; presenting as ARDS plus multi-system organ failure and CRS.Materials and methods: We prospectively enrolled ten consecutive adult (ICU) subjects [7 males; median age: 51 interquartile range (IQR): 45.1–55.9 years old] with life-threatening COVID-19 infection. All had ARDS [PaO2/FiO2 ratio: 110 (IQR): 95.5–135.5], septic shock, CRS and deteriorated within 24 h of ICU admission despite fluid resuscitation, antibiotics, hydroxychloroquine, ARDS-net and prone position mechanical ventilation. All received 5–7 TPE sessions (dosed as 1.0 to 1.5 plasma volumes).Results: All of the following significantly normalized ($p < 0.05$) following the TPE completion, when compared to baseline: Sequential Organ Function Assessment score, PaO2/FiO2 ratio, levels of lymphocytes, total bilirubin, lactate dehydrogenase, ferritin, C-reactive protein and interleukin-6. Conclusion: TPE demonstrates a potential survival benefit and low risk in life-threatening COVID-19, albeit in a small pilot study.[12]

A review on severe acute respiratory syndrome coronavirus 2 infection can be severe and fatal due to cytokine storm. TPEpotentially mitigates the harmful effects of such cytokines. We investigated the use of TPE, as rescue therapy, in patients with severe Coronavirus disease 2019 (COVID-19) infection.Results: A total of 95 patients were included, among whom 47% (n = 45) received TPE. Patients who received TPE had reductions in C-reactive protein (P = .002), ferritin (P < .001) and interleukin-6 (P = .013). After employing entropy-balancing matching method, those on TPE were also more likely to discontinue inotropes (72% vs 21%; P < .001). However, they were more likely to be associated with longer LOS (23 vs 14 days; P = .002) and longer days on ventilatory support (14 vs 8 days; P < .001). Despite marginal mortality benefit at 14-days (7.9% vs 24%; P = .071), there was no significant differences

in overall mortality (21% vs 31%; P = .315) between the groups.Conclusions: TPE was effective in reducing inflammatory markers in patients with severe COVID-19 infection, however, further research is warranted.[13]

A review on to evaluate the therapeutic use of plasma exchange in COVID-19 patients compared to controls.Results: A total of 31 COVID-19 patients were included with an overall mean age of 51±15 years (range: 27-76 years); 90% (n=28) were males, and 35% (n=11) of the patients had TPE as a mode of treatment. The TPE group was associated with higher extubating rates than the non-TPE cohort (73% versus 20%; p=0.018). Additionally, patients on TPE had a lower 14 days (0 versus 35%; p=0.033) and 28 days (0 versus 35%; p=0.033) post plasma exchange mortality compared to patients not on TPE. However, all-cause mortality was only marginally lower in the TPE group compared to the non-TPE group (9.1% versus 45%; p=0.055; power=66%). Laboratory and ventilatory parameters also improved post TPE (n = 11).Conclusions: The use of TPE in severe COVID-19 patients has been associated with improved outcomes, however, randomized controlled clinical trials are warranted to draw final, conclusive findings.[14]

A review on the 5 months since initial reports of COVID-19 came to light, the death toll due to SARS-CoV-2 has rapidly increased. The morbidity and mortality of the infection varies based upon patient age, comorbid conditions, viral load, and the availability of effective treatments. Findings from limited autopsies, clinical observations, and laboratory data suggest that high cytokine levels and a procoagulant state can precipitate acute respiratory distress syndrome and multi-organ dysfunction syndrome in critically ill patients. Therapeutic plasma exchange (TPE) merits consideration in the treatment of critically ill COVID-19 patients and is an avenue for clinical trials to pursue. If efficacious, faster recovery of patients may lead to shorter intensive care unit stays and less time on mechanical ventilation. Herein, we briefly discuss some of the various approaches currently being investigated for the treatment of SARS-CoV-2 with a focus on potential benefits of TPE for selected critically ill patients.[15]

A review on although most patients with severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) experience respiratory manifestations, multi-organ dysfunction is frequent. Almost 20% of hospitalized patients with SARS-CoV-2 infection develop AKI. The pathophysiology of AKI is a result of both the direct and indirect effects of SARS-CoV-2 infection, including systemic inflammatory responses, the activation of theRAAS, and endothelial and coagulative dysfunction. Underlying SARS-CoV-2 infection-associated AKI, an immunological hyper-response with an unbalanced innate and adaptative response defined as a “cytokine storm” has emerged. Numerous agents have been tested in an effort to mitigate the cytokine storm, and a range of extracorporeal cytokine removal techniques have been proposed as potential therapeutic options.[16]

A study is intended to compare the outcomes of COVID-19 patients with CRS treated with TPE and standard care to their counterparts receiving SC alone.Results: After CC matching, the study cohort had a mean age of 55.41 (range 56.41±11.56 in TP+SC and 54.42±8.94 in SC alone; p=0.22). There were 25.95% males and 74.05% females in both groups. The mean time from first day of illness to hospitalization was 6.53±2.18 days. The majority of patients with CRS had comorbid conditions (75.9%). Diabetes mellitus was the most common comorbidity (40.1%), followed by hypertension (25.3%), and chronic kidney disease (21%). Notable reduction in some inflammatory markers ($p<0.0001$) was observed in the group that received TPE+SC. Moreover, the patients in the plasmapheresis plus standard care group required relatively less mechanical ventilation as compared to the group receiving SC alone (46.9% vs 58.1%, respectively; $p>0.05$). The rate of extubating in

the TP+SC group vs SC alone was 60.5% vs 44.7%, respectively (p>0.05). Conclusion: For this particular group of matched patients with COVID-19-induced CRS, TPE+SC was linked with relatively better overall survival, early extubating, and earlier discharge compared to SC alone. As these results were not statistically significant, multi-centered randomized control trials are needed to further elaborate the role of therapeutic plasmapheresis in COVID-19 induced CRS.[17]

CONCLUSION

At the current scenario though "COVID-19" word not creating a panic effect still when there is secondary or associated disorder, it's very horrible and unpredictableoccurrence of symptoms as well as outcome. That's why we, authors tried to keep the review concept to the readers regarding the subject especially for Pneumonia or any other respiratory disorder cases. Hope the readers will get good and clear concept regarding the motile effect of this condition,

LIST OF ABBREVIATIONS

- TPE-Therapeutic Plasma Exchange
- ICU-intensive care unit
- TBV-Total Blood Volume
- SARS-CoV-2-SevereAcute Respiratory Syndrome Corona virus 2
- LOS-length of stay
- AKI-Acute Kidney Injury
- RAAS-Renin-angiotensin-aldosterone system
- CRS-cytokine release syndrome

CONFLICT OF INTEREST-Have no conflict of interest relevant to this research study.

SOURCE OF FUNDING-Self funding.Have not received any financial assistance from the esteemed institution.

ETHICAL CLEARANCE-Ethical clearance has been obtained from the concerned authority.

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