

Indian Journal of Surgical Nursing

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Application of Evidence Based Practice in Nursing

IJSN Volume 1, Number 3 © Red Flower Publication Pvt. Ltd

Ramesh Chandrababu

Abstract

Evidence-based practice (EBP) involves complex and conscientious decision-making which is based not only on the available evidence but also on patient characteristics, situations, and preferences. It recognizes that care is individualized and ever changing and involves uncertainties and probabilities. Evidence-Based Nursing (EBN) is a type of evidence-based healthcare, drawing on some of the traditions of evidence-based medicine. It involves identifying solid research findings and implementing them in nursing practices, in order to increase the quality of patient care. The goal of EBN is to provide the highest quality and most cost-efficient nursing care possible. EBN is a process founded on the collection, interpretation, and integration of valid, important, and applicable research. In order to practice evidence based nursing, practitioners must understand the concept of research and know how to accurately evaluate this research. These skills are taught in modern nursing education and also as part of professional training.

Key Words: Evidenced based practice; Evidenced based nursing; Evidenced based nursing practice; Intensive care unit.

Introduction

Evidence-based practice (EBP) is a problemsolving approach to the delivery of health care that integrates the best evidence from studies and patient care data with clinician expertise and patient preferences and values. Health care that is evidencebased and conducted in a caring context leads to better clinical decisions and patient outcomes. Gaining knowledge and skills in the EBP process provides nurses and other clinicians the tools needed to take ownership of their practices and transform health care. Key elements of a best practice culture are EBP mentors, partnerships between academic and clinical settings, EBP champions, clearly written research, time and resources, and administrative support.

• Nursing Research: "A scientific process that validates and refines existing knowledge and generates new knowledge that directly and indirectly influences nursing practice."

- Evidence Based Nursing/Practice: 'An integration of the best evidence available, nursing expertise, and the values and preferences of the individuals, families, and communities who are served."
- "Evidence-based decision-making is a continuous interactive process involving the explicit, conscientious and judicious consideration of the best available evidence to provide care."-Position Statement by Canadian Nurses' Association
- In increasing numbers, nurses as members of interdisciplinary and Trans disciplinary teams are implementing EBP changes.
- EBP seeks to replace practice as usual, with practice guided by rigorous outcome-oriented research, ideally randomized controlled trials. It also seeks to make practice a less subjective enterprise, and to raise it to a higher level of accountability. It is associated with efforts to identify best practices in nursing and other disciplines.

Evidence based nursing aims

1. To provide the highest quality and most costefficient nursing care possible.

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- 2. To advance quality of care provided by nurses.
- 3. To increases satisfaction of patients
- 4. To focus on nursing practice away from habits and tradition to evidence and research.

Components of Evidence-Based Nursing Practice

- Ø Key elements of a best practice culture are EBP mentors, partnerships between academic and clinical settings, EBP champions, clearly written research, time and resources, and administrative support.
- Ø When delivered in a context of caring and in a supportive organizational culture, evidence based practice can help to achieve the highest quality of care and best patient outcomes.

Application of Evidence-Based Practice in Nursing

There is a wealth of advice on EBN care to ensure patients undergoing procedures receive the best quality care from a competent workforce. Early discharge is a feature in today's surgical environment, so the importance of appropriate EBN assessment is







covered in the pre-operative and continues in the rehabilitation one.

The specialized nurses succeed in the following areas, as; education, training and mentoring; research and EBP; patient outcomes; leadership and organizational ethics; and healing environment.

Education, training and mentoring

Education on the unit begins with orientation and continues with advanced nursing skills such as the evolving field of research. The unit also is growing the number of staff nurses recognized for certification in critical care nursing.

Evidence-based practice

An increasing number of nurses on the unit must learn the methods of EBP, and are applying these methods to bathing with chlorhexidine gluconate to reduce skin bacteria, assessing for ICU-related delirium, and a new study to address sleep hygiene in the ICU.

Patient outcomes

Health care team and nurse has responsibility towards the unit meets or exceeds the desired standards for the outcome measures of unplanned extubations from mechanical ventilation, catheterrelated urinary tract infections, central-line related blood stream infections, ventilator-associated pneumonia and pressure ulcers.

Healing environment

The interdisciplinary team contributes to the healing environment by drawing upon the talents of its diverse professional staff. The unit should have the luxury of being the newest ICU at the hospital. Staff nurses needed to be involved in the design of the unit. Large patient rooms with abundant daylight with room for patients' families helps to promote a healing environment.

Leadership and Organizational Ethics

The unit's leadership of nurses must have vision in smooth running of patient care environment should be selected by the staff on the unit. The unit-based chaplain and social worker help to ensure that the unit considers all aspect of each patient's care.

Caring for People

All staff should show due regard for the contribution and diversity and treat all patients and consumers, carers and their families with professionalism and respect.

Leadership

Nurses should exercise leadership in the delivery of health services and in the broader health system by communicating vision, aligning strategy with delivering outcomes, taking responsibility, supporting appropriate governance and demonstrating commitment and consideration for people.



Partnership

Working collaboratively and respectfully with other service providers and partners is fundamental to our success.

Accountability, efficiency and effectiveness

Must measure and communicate our performance to the community and governments. Nurses should use this information to inform ways to improve our services and manage public resources effectively, efficiently and economically.

Innovation

Nurses should value creativity. Nurses must open to new ideas and different approaches and seek to continually improve our services through our contributions to, and support of, evidence, innovation and research.

Responsibilities of nurses in applying evidenced based practice

• Conduct an educational needs analysis in consultation with senior nursing staff of the department to identify opportunities for development in relation to nursing, clinical, operational and management issues and develop an educational framework and operational plan for nursing education and training.

- Develop and coordinate an educational framework with specific learning programs in consultation with senior nursing staff of the department progressing staff from beginning practitioner to advanced clinician (including identifying appropriate delivery methods and learning mediums) through evidence based research.
- Liaise with interdisciplinary management groups to ensure program development reflects best practice across the continuum of care. Promote the use of, and/or undertaking of research to enhance evidence based nursing practice.
- Consult with management to identify outcomes from learning programs. Develop outcome criteria linking such with Senior Nurse Practitioners while adhering to sound education principles.
- Periodical identification of level of knowledge and competence of individual nurses; providing mentoring, coaching and training for competency achievement and practical skills attainment in the workplace setting promoting excellence in nursing practice throughout the unit.
- Demonstrate communication and interpersonal skills of a high level, incorporating the ability to consult, liaise and negotiate with all levels of staff and clients within a multidisciplinary health care environment whilst managing change effectively.
- Apply specialized clinical and education knowledge to develop suitable internal and

external educational initiatives to provide capacity of staff to deliver a consistent high standard of patient care in accordance with current legislation, clinical standards and professional guidelines.

- Foster critical thinking and decision making with all levels of clients; develop and sustain effective working relationships and clinical teaching within the unit.
- Develop and support the orientation and continuing learning needs of current, new and graduate nursing staff. Identify levels of knowledge, competence and time frames progressing staff from beginning practitioner to advanced clinician.
- Provide input and/or leads the regular review of departmental policies and procedures reflecting evidence based principles of nursing care.
- Promote quality initiatives aligning evidence based nursing practice with all components of quality frameworks. Benchmarking to gain perspective with like facilities and actively support research with the goal of achieving excellence in nursing practice and improved service delivery.
- Provides advanced skills and knowledge in the clinical area of Cardiothoracic Nursing and the areas of educational expertise, leadership in education, evidence based practice and expert interpersonal skills
- Proactively manages own and others continuous learning and development, identifying training needs and conducting coaching, mentoring and training for continuous learning in the team.
- Consistently and enthusiastically delivers high levels of service to customers within designated timeframes, with a courteous and positive manner.
- Possess strong training skills and the ability to develop training programs, actively participates in the ongoing learning and performance development of others.
- Proactively finds solutions and uses tact, diplomacy and sensitivity to solve problems
- Demonstrates honesty, integrity and respect for all patients, carers and staff

Elements to be used while applying Evidence Based Practice in Nursing

- Continuous Learning actively manages own and others continuous learning and development, identifying training needs and conducting coaching, mentoring and training for continuous learning in the team.
- Customer Focus Consistently and enthusiastically delivers high levels of service to customers within designated timeframes, with a courteous and positive manner.
- Training and developing others Possess strong training skills and the ability to develop training programs, actively participates in the ongoing learning and performance development of others.
- Problem Solving Proactively finds solutions and uses tact, diplomacy and sensitivity to solve problems.
- Work Values Demonstrates honesty, integrity and respect for all patients, carers and staff.
- Specialist Knowledge Provides advanced skills and knowledge in the clinical area of Cardiothoracic Nursing and the areas of educational expertise, leadership in education, evidence based practice and expert interpersonal skills.

References

- Black JM, & Jacobs EM. *Medical Surgical Nursing*. *A psycho physiological approach*, 6th edition. Philadelphia: W.B. Saunder Publication; 2000.
- Brunner and Suddarth's. *Text book of Medical* Surgical Nursing, 11thedition, Newyork, Volume I. Lippincott Williams and Wilkins publishers, 2008; 16.
- Lewis M Sharon and Collner. *Text book of Medical Surgical Nursing*, ^{6th} edition. St.Louis Washington: C V Mosby Comp Publications, 2004; 5.
- Daniel Kulich. Evidence Based Practice. Journal of National Heart Lung and Blood institute 2010; (7): 9-11.
- Julian M Aroesty. Patient information: Evidence Based Patient Care. *National Library of Medicine* 2011; 68(6): 801-8.

- 6. Larosa and Brown. Evidence based and quality care. *American Medical Journal* 2010; 432(6): 314-32.
- Rossi & Bernardi L. Perspectives of Evidence Based Nursing. *Journal of Advanced Nursing Practice* 2007; 46(5): 714 -8.
- Kim,H S. Quality versus Evidence application in Patient care. *Journal of American Nurses Association* 2011; 36(8): 644-679.

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Assessment of the Knowledge and Attitude Regarding the Effects of Passive Smoking on Foetal Development Among Antenatal Mothers IJSN Volume 1, Number 3 © Red Flower Publication Pvt. Ltd

Aruna K.S.

Abstract

A descriptive study was conducted to assess the knowledge and attitude regarding the effects of passive smoking on foetal development in antenatal outpatient department. The objectives of the study were: 1) Assess the knowledge and attitude regarding the effects of passive smoking on foetal development among antenatal mothers.2) Correlate the knowledge and attitude regarding the effects of passive smoking on foetal development among antenatal mothers.2) Find out association between the knowledge and attitude regarding the effects of passive smoking on foetal development with selected demographic variables. The sample size were 100 selected by using non-probability convenient sampling technique. The results revealed 58% have moderate knowledge and 42% have inadequate knowledge regarding effects of passive smoking on foetal development. Most of the antenatal mothers 85% have unfavourable attitude and 15% are neutral and none of them have favourable attitude regarding the effects of passive correlation (r value was +0.41) between knowledge and attitude regarding the effects of passive smoking among antenatal mothers.

Key words: Antenatal mothers; Passive smoking; Foetal development.

Introduction

The history of smoking can be dated to as early as 5000 BC, and has been recorded in many different cultures across the world. Smoking primarily of tobacco is an activity that practiced by some 1.1 billion people and up to one-third of adult population. Smoking is a practice in which a substance, most commonly tobacco or cannabis is burned and the smoke is inhaled or tasted. The most common method of smoking today is through cigarettes. A 2007 report states that about 4.9 million people worldwide each year die as a result of smoking¹.

Second hand smoke (SHS) sometimes also known as environmental tobacco smoke is tobacco smoke inhaled by persons other than the intended active smoking hence the colloquial term passive smoking. Passive smoking is most common in public venues, but may also occur in private residences. Environmental tobacco smoke exposure in pregnant women adversely affect pregnancy by increasing foetal mortality and preterm delivery at higher exposure levels and showing foetal growth retardation across all levels of environmental tobacco smoke exposure². Passive smoking is a cause of lung cancer in non-smokers with long-term exposure to tobacco smoke were estimated to have 20-30% higher risk of developing lung cancer. When an expecting mother inhales tobacco smoke from a cigarette, some of the chemicals are exhaled immediately and leave the body, but others stay in the body and make their way into the placenta. The unborn child, as well as inhaling the mainstream smoke that the mother breathes in from the cigarette, which stays in her body, it may also inhale any second hand smoke that is in the air. This would mean that the growing foetus would be negatively affected by two different types of smoke. Once the baby is born, it would no longer be affected by the mainstream smoke that the mother inhales, however if the mother continues to smoke, the child will suffer the effects of second hand smoke and become a passive smoker itself.³

The unborn child in the womb relies on the mother for its food, nutrients and oxygen in order to develop and grow healthily before the birth. On smoking several things happen. Firstly, there is a reduced supply of oxygen, due to the increase of nicotine and carbon monoxide in the mother's bloodstream. This means that there is less oxygen available to the baby, as the harmful substances replace it⁴. The baby will begin to move slower after the mother has smoked a

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cigarette and the baby's heart will have to work faster, as it tries to breathe in more oxygen. Consequently, its breathing and movement will be altered.⁵ In other words, it will suffer unnecessary stress. Pregnancy complications that have been associated with women who are exposed to environmental smoke includes ectopic pregnancy, foetal death, stillbirth and death of the baby in the first week, miscarriage, placenta previa, early detachment of the placenta from the walls of the uterus before delivery, increase in the heart rate and blood pressure in the mother due to the effects of the nicotine, blood clots, vomiting, vaginal bleeding, thrush, urinary tract infection, premature rapture of the membranes which leads to premature birth, as well as infection, lack of necessary vitamins and folic acid, decreased lung function of the developing baby, caused by the nicotine that crosses the placenta to the foetus and alters the cells of the unborn child's developing lungs.⁶

Statement of the Problem

A study to assess the knowledge and attitude regarding the effects of passive smoking on foetal development among antenatal mothers attending outpatient department in selected hospital, Bangalore.

Objectives of the study

1. Assess the knowledge and attitude regarding the effects of passive smoking on foetal development among antenatal mothers.

2. Correlate the knowledge and attitude regarding the effects of passive smoking on foetal development among antenatal mothers.

3. Find out association between the knowledge and attitude regarding the effects of passive smoking on foetal development with selected demographic variables.

Research approach

The research design adapted in this study is quantitative descriptive survey approach

Setting of study

The setting of the study is Antenatal OPD at K.C.G Hospital. Bangalore

Population

The target population for the present study is antenatal mothers attending outpatient department of K.C General Hospital, Malleswaram, Bangalore.

Sample size

The sample for the present study comprises of 100 antenatal mothers attending outpatient department of K.C General Hospital, Malleswaram, and Bangalore.

Sampling technique

The sampling technique in this study is convenience sampling technique

Sampling Criteria

Inclusion Criteria

The study includes

- Age group between 18-40 years
- Who are willing to participate in the study
- Samples consists of only antenatal mothers

• Who can read, speak & write Kannada and English

Exclusion Criteria

The study excludes

- Age group more than 40 years
- Those who are not willing to participate
- Mothers, who cannot read, speak and write Kannada and English

Description of the tool

The tools of the study comprise of structured knowledge questionnaire to assess knowledge and Likert scale to assess attitude of antenatal mothers on effects of passive smoking on fetal development.

Procedure for data collection

The investigator obtained formal permission from the concerned authority to conduct study in K.C.General Hospital, Bangalore. The investigator introduced self to the antenatal mothers and maintained good communication. Before collecting data, the investigator has informed about the importance of this study and ascertained the willingness of the participants. The period of data collection was one month.

Table 1: Description of Socio Demographic variable of antenatal mothers

S.No	Demographic variables	Frequency	Percentage
	Age in years		
	a. 18—23	34	34
	b. 24—29	36	36
	c. 30—35	21	21
	d. 36-40	9	9
2	Religion		
	a. Hindu	46	46
	b. Muslim	37	37
	c. Christian	17	17
3	Education of mother		
	a. No formal education	21	21
	b. Primary education	42	42
	c. Secondary Education	28	28
	d. Graduate and above	9	9
4	Education of Husband		
	a. No formal education	26	26
	b. Primary education	26	26
	c. Secondary Education	30	30
	d. Graduate and above	18	18
5	Occupation of the mother		
	a. House wife	48	48
	b. Private employee	28	28
	c. Government	24	24
6	Parity		
	a. Primiparous	47	47
	b. Multiparous	53	53
7	Family Income (in Rs)		
	a. Less than 3000	35	35
	b. 3001—6000	36	36
	c. 6001 and above	29	29
8	Area of residence		
	a. Rural	16	16
	b. Urban	48	48
	c. Semi urban	36	36

Table 2: Assessment the knowledge regardingthe effects of passive smoking on foetaldevelopment among antenatal mothers

			n=100		
Level of knowledge	Score	No of Respondents			
Level of Miowledge	Score	Frequency	Percentage		
Inadequate	< 50%	42	42		
Moderate	5075%	58	58		
Adequate	> 75%	0	0		

Table 3: Mean, SD and Mean% of knowledgeregarding the effects of passive smoking onfoetal development among antenatal mothersn=100

Domain	Max Statements	Max Score	Range	Mean	SD	Mean%
Knowledge	25	25	8-18	13.14	2.41	52.56

Table 4: Assessment the attitude regardingeffects of passive smoking on foetal developmentamong antenatal mother

			n=100
Level of knowledge	Score	No of Respo	ondents
0		Frequency	Percentage
Unfavourable	< 50%	85	85
Neutral	5075%	15	15
Favourable	> 75%	0	0

Table 5: Mean, SD and Mean% of attitude regarding the effects of passive smoking on foetal development among antenatal mothers

					-	n=100
Domain	Max Statements	Max Score	Range	Mean	SD	Mean%
Attitude	20	20	821	13.45	3.57	33.62

Table: 6: Correlate the knowledge and attituderegarding the effect of passive smoking on fetaldevelopment

						N=100
Domain	Max Statements	Max Score	Range	Mean	SD	Mean%
Knowledge	25	25	818	13.14	2.41	52.56
attitude	20	20	821	13.45	3.57	33.62

Correlation r value=0.41 Significance at P >0.01 level

Table 7: Association between the knowledge and
the selected demographic variables

		N=100
S.No	Variables	Level of significance
1	Education of mother	24.78*df 3S
2	Education of Husband	16.15df 3S
3	Family Income	7.74*df 2S
4	Area of residence	11.9*df 2S

Table 8: Association between the attitude and
the selected demographic variables

		N=100
S. No	Variables	Level of significance
1	Age	9.5*df 3S
2	Education of mother	30.4*df 3S
3	Education of Husband	20.6*df 3S
4	Area of residence	7.67*df 2S

Aruna. K.S. / Assessment of the Knowledge and Attitude Regarding the Effects of Passive Smoking on Foetal Development Among Antenatal Mothers

Discussion

The study shows that most of the antenatal mothers 58(58%) have moderate knowledge and 42(42%) have inadequate knowledge and none of them have adequate knowledge regarding effects of passive smoking on foetal development (Table 2). The subjects had the mean score of 13.14(52.56%)with the standard deviation of 2.41 for overall knowledge regarding the effects of passive smoking on foetal development (Table 3). The study shows positive correlation (r value was +0.41) between knowledge and attitude regarding the effects of passive smoking among antenatal mothers (Table 6). This indicates statistically moderate correlation between knowledge and attitude regarding the effects of passive smoking among antenatal mothers. Thus, research hypothesis was accepted. It is evident from the present study that the Chi-Square value computed that there is association between the knowledge score and the demographic variables such as education of mother, education of husband, family income and area of residence (Table 7).

It is evident from the present study that the Chi-Square value computed that there is association between the attitude score and the demographic variables such as age, education of mother, education of husband and area of residence only (Table 8).

Nursing Implications

• The findings of present study will improve the knowledge of antenatal mothers regarding the effects of passive smoking

• The study improves the pregnancy outcome of mother who is at risk of passive smoke.

Conclusion

Passive smoking became a major health hazard nowadays. The study suggested that the antenatal mothers should be aware about the health hazards around them.

References

- 1. West, Robert and Shiffman, Saul (2007). *Fast Facts: Smoking Cessation*. Health Press Ltd, 2007; 28.
- 2. Quit Smoking. *The ill effects of passive smoking*. Smoking Cessation Guide MedLine. 2000.
- Passive Smoking increases the risk of stillbirth and birth defects; study suggests. *Science Daily*, March 2009.
- Ferdinand Lazzaroni, Stepheno Bonass evfemia manniello. *International Journal of Epidemiology* 1999; 19(4): 960-966.
- 5. Wirth N, Abou-Hadman K, Spinosa A Bohadana. *Journal of Maternity* 2004; 7-15.
- 6. Passive Smoking and risk factors, update of Scoth, 2004.

Effectiveness of Progressive Muscle Relaxation Technique on Pain Perception among Patients Who are Subjected to Abdominal Surgery IJSN Volume 1, Number 3 © Red Flower Publication Pvt. Ltd

Ramesh Chandrababu

Abstract

An experimental study was conducted to assess the effectiveness of progressive muscle relaxation technique on pain perception among patients who are subjected to abdominal surgery. Experimental repeated measures design was chosen for this study. With a total of 40 male and female patients, 20 patients were considered as experimental group and 20 as control group. The technique that was adopted for this study was random sampling method. Progressive muscle relaxation was given as intervention for experimental group and only observation was made in the control group. Collected data were analyzed by descriptive and inferential statistics. Study results showed that mean pain score for the first day morning in pretest was 6.70 with standard deviation 0.92 and the post test mean was 6.30 with standard deviation 1.03. Thus the mean pain score (6.3) on third post operative day was less compared to mean pain score (6.7) on the first post operative day. From the above mentioned statistical values it is observed that there is a high statistical significance in pain perception at P<0.001 and there were no changes were in level of pain in control group. This clearly indicates that progressive muscle relaxation technique has influence on pain perception in the experimental group.

Key Words: PMR (Progressive Muscle Relaxation); **IASP** (International Association for the study of Pain); **SBP** (Systolic Blood Pressure); **DBP** (Diastolic Blood Pressure).

Introduction

Everyone has experienced some type or degree of pain. It is the most common reason why people seek health care. Despite being one of the most commonly occurring symptoms in the medical world, pain is one of the least understood. A person in pain feels distress or suffering and seeks relief. The nurse will execute a variety of nursing interventions to bring relief or to restore comfort. The IASP, 1979 defined pain as "An unpleasant, subjective sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage".

Pain is the most common symptom which leads a patient to seek medical help. Pain is defined by each one of us according to our personal experiences and involves a variety of feelings, sensations and

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situations. Pain is the symptom of a disease, the treatment of which promotes its resolution. Pain is an individual and subjective phenomenon. The patient's verbalization of the painful experience to the health care professionals will help them to implement the measures that will help in minimizing the level of pain. Pain is also considered to be any type of physical damage that is reported to be felt by the patient at the time when he claims to feel it.

Nursing professionals have made efforts to help individuals in the evaluation and control of their own reactions for which there are strategies that use physiological, cognitive and behavioral techniques. Among them most commonly used is relaxation technique which can be used at any phase of health or illness. Nurses can help individuals recognize the source of pain and stress in their lives and identify methods of adaptive coping. Pain management requires a holistic approach.

Need for the study

The pain experienced by the post operative patients in hospital settings is one of the most common clinical situations encountered by a nurse. Nurses have direct

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responsibility for the provision of measures to relieve pain.

Both nursing and medicine have gradually adopted the primary assumption that essentially it is the body that becomes sick, the mind may usually be secondarily involved. In holistic approach to patient care, the mind and the body are seen as operating on a continuum. The challenge for nurses is to help patients to understand about the body and mind which are interconnected and that mind therapies used in conjunction with traditional medical therapies can hasten the healing process.

Bonica and Benedetti (1983) estimated that 5% to 20% of patients have minimal pain, 25% to 40% experience moderate pain and the remaining 40% to 70% suffer from severe pain after a major abdominal surgery. Pain triggers a stress response in the sympathetic nervous system which results in increase in muscle tension, heart rate, respiratory rate, blood pressure, and blood glucose level and blood coagulation process. Various relaxation techniques have been used and their effects upon pain have been described in the literature. The relaxation technique used in the post operative period results in improved comfort level of patients, decrease in abdominal muscle tension, reduction of distress caused by painful sensation.

The relaxation technique is therefore a participant exercise in which the individual himself seeks a state of relaxation and physical well being. The relaxed patients acquire a quicker recovery from the disease. This leads to a cost effective and less expensive hospitalization and less sufferings to the clients. Nurses have got a pivotal role in eliminating stress, reducing the pain, and improving the condition of post operative patients

Statement of the problem

A study to assess the effectiveness of progressive muscle relaxation technique on level of pain and certain physiological parameters among patients following abdominal surgery at Mediscope Hospital, Bangalore.

Objectives of the study

1. Assess the level of pain and physiological parameter among patients who are subjected to abdominal surgery.

- 2. Determine the effectiveness of progressive muscle relaxation technique among study group subjects.
- 3. Associate the selected demographic variables with the physiological parameters.

Hypothesis

There is a significant decrease in the level of pain perception among patients following abdominal surgery who have practiced progressive muscle relaxation technique than who did not.

Assumption

Pain is subjective in nature and unique in individual.

Research Methodology

Research Approach

An evaluative approach of quantitative research was considered appropriate for the present study.

Research Design

True experimental repeated measures design was chosen for this study. The design can be represented as

	Μ	E
Group A	$ O_1 X O_2$	$O_1 X O_2$
Group B	$- O_1 - O_2$	$O_{1} - O_{2}$

Key Figures

Group A	-	Experimental Group
Group B	-	Control Group
O_1	-	Pre test assessment of level of pain
O ₂	-	Post test assessment of level of pain
X	-	Progressive Muscle Relaxation(PMR)
М	-	Morning
E	-	Evening

Research Setting

The study was conducted in Mediscope hospital, Bangalore which is reputed and well equipped with modern facility. In each surgical unit has male and female surgical wards consisting of 60 beds and main block consisting of 62 beds.

Population

The population included in the study was all patients admitted for elective abdominal surgery in hospitals.

Sampling criteria

Male and female patients aged between 18-60 years and patients who underwent elective abdominal surgery.

Sample Size

The total sample was 40, among them 20 patients were considered as experimental group and 20 patients in the control group subjects.

Sampling Technique

The technique that was adopted for this study was random sampling method.

Data Collection Tool

The tool was developed based on the professional experience and the guidance of experts. Part I: Consist of demographic variables Part II Consists pre and post test assessment of pain and physiological parameters like Respiratory rate, pulse rate and Blood Pressure. Part III Consists of numerical pain rating scale, which has 10 cm baseline as per the recommendations. The content validity was obtained from the medical and nursing experts.

Data Collection Procedure

The pilot study was conducted with sample size of 6 patients. The feasibility for the research design was tested. The methodology and tool were modified based on the problems encountered in data collection during the pilot study. Written consent from ethical committee was obtained. Patients posted for elective abdominal surgery were approached preoperatively. The investigator explained the purpose of the study and assessed the patients who were willing to participate in the study.

The patients were assisted to perform the PMR with verbal instruction during the previous day of the surgery in the wards. The time taken for PMR was 20 minutes. The PMR intervention was performed by the patient on the first post operative day at 7.30 am prior to the administration of the analgesics by 8 am. The pretest of the physiological parameters and level of pain was assessed at 7.25 am using numerical pain rating scale. Post operatively the patient practiced the PMR technique for 20 minutes from 7.30 am to 7.50 am. The post test of the physiological parameters and pain was assessed at 7.55 am after practicing PMR technique. Similarly in the evening, the progressive muscle relaxation intervention was performed by the patient at 7.30 pm prior to the administration of the analgesics by 8 pm.

Data Analysis

The collected data were analyzed by descriptive and inferential statistics. The descriptive statistics were used to declare the demographic variables, assess the level of pain. Inferential statistical analysis, the paired 't' test was used in analyzing the effectiveness of PMR among control and experimental group subjects.

Results and Discussion

The above table depicts the intensity of pain perception in the initial three post operative days, before and after interventions among experimental group. It reveals the pretest and post test mean and standard deviation of pain perception among the study group subjects. The mean pain score for the first day morning in pretest was 6.70 with standard deviation 0.92 and the post test, mean was 6.30 with standard deviation 1.03. Thus the mean pain score (6.3) on third post operative day was less compared to mean pain score (6.7) on the first post operative day. From the above table it is observed that there is a high statistical significance in pain perception at P<0.001.

Table 1: Distribution of pretest and post test mean and standard deviation of pain perception in different days among the experimental group.

N=20

Dain	Pre	test	Post	Гest	ʻt'	'p'
гаш	Mean	SD	Mean	SD	Value	Value
Day 1	-		-			
Morning	6.70	0.92	6.30	1.03	3.559	.002
Evening	6.25	1.02	6.30	0.73	4.819	.000***
Day 2						
Morning	5.35	0.93	4.95	0.89	3.559	.002
Evening	4.55	4.05	4.05	1.0	4.359	.000***
Day 3						
Morning	3.55	1.19	2.95	1.00	5.339	.000**
Evening	2.50	0.95	2.00	0.79	4.539	.000**
			* D 0.00	4		





This clearly indicates that progressive muscle relaxation technique has influence on pain perception. The same data is represented in the form of graph in fig.1.

Table 2 depicts the physiological parameters such as respiration rate, pulse rate, systolic blood pressure, diastolic blood pressure and the mean and standard deviation of each variables among the study group. The table reveals that the paired't' test value of pulse rate was 2.449 and it showed a statistical significance at P<0.05. The table also shows no significant variation in the respiration rate, systolic blood pressure, diastolic blood pressure in pretest and post test mean and standard deviation. Therefore the table indicates that PMR technique did not show any variations in the respiration rate and the blood pressure. Fig 2 shows the representation of the same data.

When the effect of progressive muscle relaxation technique was assessed comparing with that of the control group, it showed to be highly significant at the level of p<0.001. These findings support the findings of McGrath (1994) that relaxation technique can alter the pain perception and bring a significant reduction in the level of pain from severe to moderate (n=35) and from moderate to mild level of pain (n=45) in 80 patients who were selected. The study concluded that the psychological factors such as situational and emotional factors can profoundly alter the strength of pain perception.

The pretest and post test assessment score in the study group indicated a marked reduction in the pain intensity. As the reduction of pain perception was noted to be higher in the study group than the control group, it indicated better response of the patients to PMR technique. This indicates that patients can be diverted from pain with PMR technique thereby improving their coping abilities and making their hospital stay shortened. The chi square test shows that there is significant association between the selected demographic variables with the level of pain perception in the study group who are subjected to abdominal surgery.

Table 2: Distribution of pretest and post test mean and standard deviation ofphysiological parameters among the experimental group

N =20

Physiological	Pre test		Post 7	ſest	ʻt'	р
Parameters	Mean	SD	Mean	SD	Value	Value
Respiration	23.48	1.19	23.15	1.11	1.592	.128
Pulse	73.83	7.93	73.11	8.06	2.449	.024
Blood Pressure						
SBP	120.70	6.93	120.53	6.90	.809	.428
DBP	77.58	4.38	77.17	4.16	1.751	.096



In regard to the hypothesis formulated at the start of the research study, there is a significant reduction in the level of pain perception among patients who practiced progressive muscle relaxation technique than the patients who did not practice progressive muscle relaxation during the post operative period. The tested hypothesis of the study is thus accepted.

Conclusion

PMR technique is a safe, better and inexpensive measure which brings about a higher level of relaxation and reduction of stress. Patients have greater comfort during the post operative period and healing hastens reducing the number of days of hospitalization. Effective use of PMR technique as a complementary therapy will reduce the intake of sedation and analgesics during the post operative period thereby fastening recovery.

Recommendations

- 1. Replication of the study can be done with large samples.
- 2. Instead of demonstration a study can be done by using video assisted teaching.
- 3. A similar study could be conducted among patients following various categories.
- 4. A comparative study could be done between different educational strategies such as demonstration; video assisted teaching, slide projectors.
- 5. A comparative study on the effect on progressive muscle relaxation technique and other non pharmacological methods (music, guided imagery) can be done.

References

- 1. Ahuja N. *A short textbook of the psychiatry*, Second Edition. New Delhi: Jaypee Brothers; 2002, 45.
- 2. Anderson GC. Non pharmacological nursing intervention, relaxation and music for pain relief. *Journal of music therapy* 2005; 6: 140-146.
- 3. Atsberger DB. Effect of pain on the mental status and physical ability of patients undergoing surgery. *Journal of psychiatry medicine* 2005; 3: 52(2), 448-450.
- Black JM & Jacobs EM. Medical Surgical Nursing. A psychophysiological approach. (Ed.6). Philadelphia : W.B. Saunder;. 1997, 201.
- 5. Bonica and Benedetti Pain perception. *NewYork Times* 1983; 197: 10-11.

- 6. Cheung YL. The effect of progressive muscle relaxation training preoperative in stomal surgery. *Journal of Nursing research* 2006; 5: 11(2), 345-352.
- 7. Evart CK. Effectiveness of relaxation technique in lowering blood pressure in postoperative period. *Journal of medicine* 2003; 19(15): 100-120.
- Flaherty GG. Effectiveness of progressive relaxation technique among post operative patients. *International Journal of Holistic Nursing* 2010; 19: 265-266.
- 9. Gavin M and Litt Relaxation. Training decrease pain and narcotic demand in post operative phase. *Journal of clinical psychology* 2006; 8(1): 67-72.
- 10. Good M. The effect of relaxation technique on sensory and effective pain of individual following surgery. *Journal of medicine*, 1995; 77(6): 556-560.

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A. Maria Therese*, G. Muthamizselvi**

Abstract

Objective: To assess the post operative activities (Ambulation, Deep breathing exercises, circulatory exercises, abdominal exercises and daily activities) among experimental and control group after pre operative teaching on early ambulation. To evaluate the effectiveness of computer–assisted pre operative teaching in reduction of post operative complications by early ambulation in experimental and control group.

Methods: Sixty samples (30 in experimental and control group) were selected by convenient sampling technique from the male and female surgical ward, post operative annex ward. The researcher used post test only design Interview schedule is used to collect the demographic information, Observational checklist deals with post operative activities and, Assessment of physiological parameters, used as an instrument to assess the effectiveness of computer assisted pre operative teaching in reduction of post operative complication among patient undergoing abdominal surgery.

Results: The finding of the study shows that ,the mean score for the 3^{rd} day was 37.74(75.54%) with SD of 7.79 in experimental group, 18.07(36.14\%) with SD of 1.82 in control group and their percentage of gain score difference is 39.40%. Since the percentage gain score difference is increasing it shows that computer assisted teaching has effectiveness in experimental than control group. There is no statistically significant difference in reduction of post operative complications in both groups.

Conclusions: The major conclusion drawn from this present study is that there is increasing level of activity occurs in the experimental group by means of computer assisted pre operative teaching. There is significant difference between the effectiveness of computer assisted pre operative teaching on early ambulation between experimental and control group.

Keywords: Early ambulation; Post operative complications; Abdominal surgery.

Introduction

Nursing is a healthcare profession focused on the care of individuals, families, and communities so they may attain, maintain, or recover optimal health and quality of life from conception to death. Nurses work in a large variety of specialties where they work independently and as part of a team to assess, plan, implement and evaluate care. so, Nurse's pressure are inevitable throughout the therapeutic intervention to minimize the complications, for easy recovery to provide the

comprehensive care to decrease the length of hospitalization. Surgery is an ancient medical specialty that uses operative manual and instrumental techniques on a patient to investigate and/or treat a pathological condition such as disease or injury, or to help improve bodily function or appearance. Surgery is a major source of a hospital's income. Although major surgical interventions still occur in the hospital setting, the 1980s introduced a trend to perform surgery in ambulatory settings. Many of the services of the hospital's perioperative departments are now performed in outpatient settings. This change has had a positive impact on decreasing health care costs related to surgery.

The term abdominal surgery broadly covers surgical procedures that involve opening the abdomen. Surgery of each abdominal organ is dealt with separately in connection with the description of that organ (stomach, kidney, liver, etc.)

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Generally, patients are expected to stay in the hospital for 4 to 5 days after the surgery. During this period, the nursing of the patient plays a significant role in helping the patient to a speedy recovery after abdominal surgery. The nurse will help the patient to change position from lying his/her backside at an interval of two hours. After gaining the sufficient strength, he/she can carry out this process without any assistance. With the help of the nurse the patient will be expected to do some simple exercises, as advised by the expert and she will help him to make a short walk after the surgery.

The term ambulate means to walk. Ambulating the client keeps him more active and improves muscle tone and strength in his legs. It also slows loss of bone mass and density related to osteoporosis. The client who is up walking has increased peristalsis and circulation. The client also gets a sense of accomplishment and maintains greater independence. Some clients who have been ill or are recovering from an injury or surgery may need help with walking. The client may have decreased muscle strength or a change in his centre of gravity or posture. Some clients need help with ambulation because of a decrease in their sensory perception or impaired balance. Confusion, medications and distractions can all affect a client's ability to walk independently. Every hospitals should be aware of the important of early ambulation on post operative to prevent complication .According to the hospital protocol the nurse and the physiotherapist initiates and assist at the time of ambulation .It facilitate the patient to meet the activity of daily living, restoration of physiological activity and psychological well being.

Materials and methods

The researcher conducted the study with Sixty samples (30 in experimental and control group) were selected by convenient sampling technique from the male and female surgical ward, post operative annex ward .The researcher used post test only design Interview schedule is used to collect the demographic information, Observational checklist deals with post operative activities and, Assessment of physiological parameters, used as an instrument to assess the effectiveness of computer assisted pre operative teaching in reduction of post operative complication among patient undergoing abdominal surgery.

The investigator planned to collect the data in the respective wards twice a day from Monday to Sunday. On the first day of meeting with the people self introduction was made and the purpose of study was explained. Consent from the sample was obtained. Each sample took 10-15 mts approximately for collecting the demographic variable. The investigator collects the operation list day before surgery in the respective wards. Computer assisted teaching was given to the sample before the day of surgery. The investigator visits twice the day and assess the post operative activities of the sample from the 1st post operative day till 3rd day including physiological parameters. Activity score and physical parameters score were given in mean and standard deviation. Differences between experiment and control groups were analysed using student independent t-test.

Results

The present study consisted of 30 samples in experimental group who underwent preoperative teaching on early ambulation. Control group consisted of 30 samples who underwent abdominal surgery but no preoperative teaching. The statistical results of level of activities among experimental and control group were 5(16.7%) of experimental group and 26(86.7%) of control group, were doing the activities with assistance and 26(83.3%) of experimental group and 4(13.3%) them were doing the activities independently. The obtained c2 is 42.85 at the level of 0.001 it is very highly significant. It was analysed using pearson chisquare test.

The statistical results of Effectiveness Of Computer Assisted Pre-Operative Teaching mean score was 37.74 with SD of 7.79 in experimental group, 18.07 with SD of 1.82 in control group and their percentage of gain score difference is 39.40%. Since the percentage gain score difference is increasing it show that computer assisted teaching has effectiveness in experimental than control group.

There is no statistical significant difference in reduction of post operative complications by early ambulation among experimental and control group. A. Maria Therese & G. Muthamizselvi / Effectiveness of Computer Assisted Pre-Operative Teaching on Reduction of Post Operative Complications by Early Ambulation among Patient Undergoing Abdominal Surgeries

	Level of activity	Ex	peri ment group	Control group		Chi square test
	acuvity	n	%	n	%	
DAY	Poor	0	0.00%	0	0.00%	2=3.16 P=0.08
1	Moderate	30	100.00%	30	0.00%	df=2 Significant
	Good	0	0.00%	0	0.00%	
DAY	Poor	0	0.00%	0	0.00%	2=27.80 P=0.001***
2	Moderate	11	36.70%	27	90.00%	df=2 Significant
	Good	19	63.30%	3	10.00%	
DAY	Poor	0	0.00%	0	0.00%	2=42.85 P=0.001
3	Moderate	5	16.70%	26	86.70%	** *
	Good	25	83.30%	4	13.30%	df=2 Significant

*significant at P≤0.05 ** highly significant at P≤0.01 *** very high

	Min – Max score	Experiment group		Cont grou	rol 1p	Percentage of Gain score difference
		Mean score	SD	Mean score	SD	
DAY 1	0 -50	17.37	4.54	8.17	4.57	18.40%
DAY 2	0 -50	29.53	8.04	14.53	4.07	30.00%
DAY 3	0 -50	37.77	7.79	18.07	1.82	39.40%



The above table indicates the association between level of activity and age group 10(100%) of them were doing good belong to the age group of 20-30 yrs, 1(76%) of them were doing moderate level of

activity,2 (92.4%) of them were doing good activity level. Belong to the age group of 31 -40 yrs, 2(40%) of them were doing moderate level of activity, 3 (60.0%) of them were doing good activity level belong

Demographic variables		Level of Activity(Day 3)					
		M	oderate	(Good		Chi square test
		n	%	n	%	Ν	
Age	20 - 30 yrs	0	0.0%	10	100.0%	10	
	31 -40 yrs	1	7.6%	12	92.4%	13	2=11.12 P=0.01
	41 - 50 yrs	2	40.0%	3	60.0%	5	DF=3 Significant
	51 -60 yrs	1	50.0%	1	50.0%	2	
Gender	Male	2	8.3%	22	91.7%	24	2=6.00 P=0.01
	Female	3	50.0%	3	50.0%	6	DF=1 Significant
Marital status	Married	5	17.9%	23	82.1%	28	2=0.42 P=0.51
	Unmarried	0	0.0%	2	100.0%	2	DF=1 Not Significant
Religion	Hindu	5	19.2%	21	80.8%	26	
	Muslim	0	0.0%	2	100.0%	2	2=0.92 P=0.63
	Christian	0	0.0%	2	100.0%	2	DF=2 Not Significant
Education status	Illiterate	5	18.8%	11	81.3%	16	
	Primary/middle	0	16.7%	9	83.3%	9	2=/.58 P=0.02
	High school/HSc	0	0.0%	5	100.0%	5	DF=2 Significant
Occupation status	Daily Wage Labourer	2	11.1%	16	88.9%	18	
	Industrial Worker	0	0.0%	5	100.0%	5	2 7 00 D 0 07
	Govt Employee		((70)	1	22.20/	2	2=7.00 P=0.07
		2	00./%		33.3%	3	DF=3 Not Significant
	None	1	25.0%	3	75.0%	4	
Monthly income	Rs 3000 - 5000	3	15.8%	16	84.2%	19	
	Rs 5001 - 7000	0	0.0%	7	100.0%	7	2=4.61 P=0.20
	Rs 7001 -10000	1	50.0%	1	50.0%	2	DF=3 Not Significant
	>Rs.10000	1	50.0%	1	50.0%	2	_
Surgical	APPENDICITIS	2	28 60/	5	71 /0/	7	
diagnosis		2	20.070	5	/1.4/0	/	
	LIH	1	12.5%	7	87.5%	8	2=6.76 P=0.15
	PREV.LSCS	0	0.0%	1	100.0%	1	DF=4 Not Significant
	RIH	1	7.7%	12	92.3%	13	
	UMBILICAL SEPSIS	1	100.0%	0	0.0%	1	
name of the	APPENDECECTOMY	2	28.6%	5	71 4%	7	
surgery	INGTEDECTOR	2	20.070		/1.1/0	,	
	HISIEKECIUMY	1	100.0%	0	0.0%	1	2=6.71 P=0.15
	LSCS	0	0.0%	1	100.0%	1	DF=4 Not Significant
	LT.HERNIOPLASTY	1	11.1%	8	88.9%	9	
	RT.HERNIOPLASTY	1	8.3%	11	91.7%	12	

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* significant at P \leq 0.05 ** highly significant at P \leq 0.01 *** very high significant at P<0.001

to the age group of 41-50 yrs, 1 (50%) of them were doing moderate and good activity level belong to the age group of 51-60 yrs. The obtained c2 value is 11.12 (P=0.01) which is statistically significant hence there is association occurs between age and activity level. When look into the association between level of activity with gender, 2 (8.3%) of them were doing moderate, 22 (91.7)were doing good –were male, 3(50%) of them were doing moderate and good level of activity belongs to female. The obtained c2 value is 6.00 (P=0.01) which is statistically significant hence there is association occurs with gender and activity level. And the association between level of activity with educational status 5 (18.8%) of them were doing moderate, 11 (81.3%) were doing good –was illiterate, 9(83.3%) of them were doing good level of activity had primary/middle level of education, 5(100%) of them were doing good

level of activity had high school education The obtained c2 value is 7.58 (P=0.02) which is statistically significant hence there is association occurs with education and activity level.

Discussion

Quasi experimental study with post test only control group was conducted to evaluate the effectiveness of computer assisted pre-operative teaching on reduction of post operative complications by early ambulation among the patient undergoing abdominal surgeries.

The discussion of the present study is based on the findings obtained from statistical analysis based on the objectives of the study. The study findings revealed the mean activity score of 17.37 with SD of 4.54 in experimental and in control group mean activity score was 8.17 with SD of 4.57. The obtained t value was 7.82 significant at 0.001 level. 2nd daywise assessment of mean activity score among experimental group was 29.53 with SD of 8.04 and in control group mean activity score was 14.53 with SD of 4.07. The obtained t value was 9.11 significant at 0.001 level 3rd daywise assessment of mean activity score among experimental group was 37.77 with SD of 7.79and in control group mean activity score was 18.07 with SD of 1.82. The obtained t value was 13.48 significant at 0.001 level .Hence there is increase level of activities for the 3 days.

To assess the effectiveness of computer assisted teaching, the mean score for the 3rd day was 37.74 (75.54%) with SD of 7.79 in experimental group, 18.07 (36.14%) with SD of 1.82 in control group and their percentage of gain score difference is 39.40%. Since the percentage gain score difference is increasing it show that computer assisted teaching has effectiveness in experimental than control group. To evaluate the effectiveness of computer -assisted pre operative in reduction of post operative complications by early ambulation in experimental and control group. The study findings show that, the mean score for SBP was 114.33 with SD of 10.06. The obtained t value was 1.85, (P=0.07) hence it is not statistically significant. On 2nd day The mean score for SBP was 117.33 with SD of 6.91. The obtained t value was 1.16, (P=0.87) hence it is not statistically significant. On 3rd day The mean score for SBP was 117.33 with SD of 6.40. The obtained t value was 1.42, (P=0.16) hence it is not statistically significant. In this study none of the physiological parameters such as (temperature, pulse rate, blood pressure, saturation), have influenced with early ambulation for 3 days. In general there is no statistically significant difference between experiment and control group in reduction of post operative complications by means of early ambulation . From this above findings revealed that there is no significant reduction in post operative complications by computer assisted pre operative teaching.

According to this findings there is increasing level of activity occurs in the experimental group by means of computer assisted pre operative teaching. There is significant difference between the effectiveness of computer assisted pre operative teaching on early ambulation between experimental and control group .There is no statistically significant difference in reduction of post operative complications by early ambulation.

Nursing Implications

Health is the wealth of the people. To preserve health in a fruitful way, a quality care is needed. This care should be staring from the pre operative stage to prevent from post operative complications.

Nursing Education

The present study emphasis the need for a computer assisted pre operative teaching on early ambulation following abdominal surgery.

Nursing Research

Research is done to draw out new facts from already existing things and broaden the body of knowledge hence this study can be applied to large sample size.

Nursing Practice

- The study implies the importance of pre operative teaching on early ambulation for patient undergoing abdominal surgery.
- Motivate the staff and student nurse to be aware of the post operative complications, hospital acquired infections.

- Make them to understand the need for pre operative teaching.
- Make them to understand the importance of early ambulation following abdominal surgery.

Nursing Administration

- The nurse administrator should conduct survey of the hospital and need to be aware of the current problems and standard of care and hospital policies.
- The nurse administrator should initiate to organize health education programme about the post operative care during their pre operative stage which should covers the holistic needs of the individual .
- The administrator should provide inservice education for the staff and students to create awareness about the pre operative care so that the knowledge can be impacted to those who are admitting in the respective wards which will helps in reduction of post operative complications, decreased length of stay etc.

Recommendations

- A similar study can be conducted for large sample size for the generalization of the findings.
- A similar study can be conducted with pre test and post test control group design.
- A similar study can be conducted with different tools.
- A similar study also can be conducted in different hospitals.
- The same study can be conducted using live demonstration in the place of teaching slides during pre operative teaching .

Limitation

The patient under the age group of 50-60 years face more difficult to do the exercises than the age group of 20-49 years.

Conclusion

The major conclusion drawn from this present study is that there is increasing level of activity occurs

in the experimental group by means of computer assisted pre operative teaching. There is significant difference between the effectiveness of computer assisted pre operative teaching on early ambulation between experimental and control group. There is no significant difference in reduction of post operative complications between the experimental and control group by early ambulation. There is significant difference in effectiveness of computer assisted pre operative teaching on early ambulation with selected demographic variables.

References

- 1. Abraham AS et al.Value of early ambulation in patients with An without complication after myocardial infarction. *N Engl J Med* 2005; 292(14).
- Arenal JJ. Mortality associated with abdominal surgery in elderly. *Canadian Journal Of Surgery* 2003; 46(2).
- 3. Aschwanden M, et al. Acute deep vein thrombosis: Early mobilization does not increase the frequency of pulmonary embolism. *Journal of Thrombosis and Haemostasis* 2001; 85.
- 4. British, Teaching stoma-management skills: the importance of self-care. *Journal of Nursing* 2005; 14(6).
- 5. Browning L. The quantity of early upright mobilization performed following upper abdominal surgery is low: an observational study. *Australian Journal of physiotherapy* 2007; 53(1).
- 6. Holler EM, Paulsen A. Case report: the practical use of the self-care deficit nursing theory for a patient with a neuro endocrine cancer of the duodenum. *Journal* 2010; 23(1).
- Barbara C Lang, Carole G Phipps, Wilma J. Phipps, Virginia L Cassmeyer. *Adult nursing a nursing* process approach, 5th ed). Elsevier Health Sciences, 1995.
- Catalano T Joseph (2007). Nursing Now-Today's issues, Tomorrow Trends., 4th ed. New Delhi: Jaypee Publications; 2007.
- Joyce, M Black. *Medical Surgical Nursing*, 7th ed. 2007; Volume-2.
- Jackson IJ. *History of day surgery*. Day Surgery-Principals and practice. 1st ed. London: Baillere Tindall; 1997.

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A. Maria Therese & G. Muthamizselvi / Effectiveness of Computer Assisted Pre-Operative Teaching on Reduction of Post Operative Complications by Early Ambulation among Patient Undergoing Abdominal Surgeries

- Joyce K, Keithley. Mastering Medical-Surgical nursing, 1sted. Pennsylvania: Spring House Publication; 1998.
- 12. Nettina SM. *The Lippincott manual of nursing practice* (6th ed). Philadelphia: Lippincott Williams and wilkins; 1996.
- Nirmal Kaur. A study to assess the effectiveness of planned preoperative teaching on early ambulation for patients undergoing abdominal surgery", *Advance Practice Initiatives*. The 39th Biennial Convention; 2007.
- 14. Sophie Ebara. Functional independence after major abdominal surgery in the elderly. *Journal of American College of Surgery* 2004; 199(5).
- 15. Timmey BK. *Fundamental nursing skill, and concept,* 8th ed. Philadelphia: Lippincott Williams and wilkins; 2005.
- Williams B. Supporting self-care of patients following general abdominal surgery. *Journal of Clinical Nursing* 2008; 17(5).

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Case Presentation on Klatskin's Tumour

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Leena J.

Abstract

This is a case presentation on Klatskin's tumour. He is aged 47 admitted to Gastroenterology ward with the complaints of progressive abdominal distention over a period of one month, with pain in right upper quadrant. His abdominal girth confirmed distention due to ascites and thrill on ballottement. He had hypoalbuminemia in diuretic stage but his Serum Protein levels were within normal limits. He had stent fixation markings and scar due to radiation therapy on his abdomen. His Alkaline Phosphatase indicated an obstruction of biliary system. Paracentesis confirmed infection. He was diagnosed as Hilar Cholangio Carcinoma i.e., Klatskin's Tumor with Stenting and Post Radiation Therapy with Reactive Mesothelial Proliferation. He was found to have Liver Secondaries (Unresectable Tumor) since the growth extended to the under surface of the liver. ERCP was attempted twice and precut was extended. Liver enzymes were given along with symptomatic treatment. His activities were gradually increased as he could tolerate. The case presentation is extended with the application of nursing process as well.

Key words: Klatskin's tumor, Paracentesis; Stent; As cites.

Introduction

Anatomy and physiology (bile duct)

The bile duct is long tube-like structure that connects the liver to the intestine and transports bile from the liver to the intestine. The top half of the bile duct is associated with the liver while the bottom half of the bile duct is associated the pancreas. The bile duct enters the part of the intestine called the duodenum into a structure called the Ampulla. Blockage of the bile duct causes build up of the bile in the blood since the bile can no longer go into the intestine. This condition is called jaundice and the skin becomes yellow from the accumulated bile in the blood.

Bile duct cancer

Bile duct cancer or Cholangio carcinoma are tumors that occur in the bile duct. Bile duct cancer usually develops in patients older than 65 years old.

Types of bile duct tumors

There are several suggested classifications. Clinically, Intra hepatic and Extra hepatic Cholangio Carcinomas are different entities, but they are linked by cell of origin and etiological factors. Intra hepatic Cholangio Carcinomas arises from small ducts or ductules and presents as an intra hepatic mass. Extra hepatic Cholangio Carcinomas arises from large ducts and usually presents as biliary tract obstruction and further subdivided in to upper duct tumors or Peri Hilar or Klatskin's tumors and lower duct tumors (Feldman, 2002).





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Diagram showing the position of the bile ducts © CancerHelp UK

Correspondance: Mrs Leena J, Associate Professor, PSG College of Nursing, Coimbatore-641004, Tamilnadu, South India.

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ORIGIN	BENIGN	MALIGNANT
Henatocytes	Adenoma	Henato cellular
iiopato e j teo	1 10 1110 1110	Carcinoma
Connective	Fibroma	Sarcoma
tissues		
Blood vessels	Hemangioma	Hemangio
	-	Endothelioma
Bile ducts	Cholangioma	Cholangio sarcoma

Classification of Primary Liver Neoplasms

removal of the tumor together with a liver resection (removal) in an attempt to provide a surgical cure.

Klatskin's tumors

Bile duct cancer of the upper part of the bile duct is also called Klatskin's tumor. Klatskin's tumors involve the upper part of the bile duct as divides to enter the right and the left parts of the liver. The bile



Radiological Diagnosis of Klatskin"S Tumor- Cholangiogram

Courtesy: Dept of Radiology, Kyungpook National University Hospital, Knuhrad

Two major types of bile duct tumors are found

Distal bile duct tumors

Tumors affecting the bottom half of the bile duct

Klatskin's tumors

Tumors affecting the upper part of the bile duct

This separation between the two locations is important since the treatment for the tumors in the two locations is different. For tumors affecting the bottom half of the bile duct, the cancer is removed with a Whipple operation. For tumors in the top half of the bile duct, surgical treatment often requires ducts in the liver are called right and left hepatic ducts. The tumor may involve one or both right and left sides of the hepatic ducts as they enter the liver. The hepatic ducts are closely associated with the blood vessels that supply blood to the liver. Klatskin's tumors are closely associated with liver and as they grow invasion into the blood vessels that supply blood to the liver is often found.

Cholangio carcinoma

Cholangio Carcinoma is an adeno carcinoma of the intra hepatic bile ducts (Yamada, 2009). Cholangio Carcinoma originates from small intra

Life Style of Clonorchis Sinensis, a Liver Fluke Associated with Cholangio Carcinoma



Courtesy: www.answers.com, www. Science codex.com

hepatic bile ducts – peripheral Cholangio carcinoma, large intra hepatic bile ducts – hilar Cholangio carcinoma or Klatskin's tumor and extra hepatic ducts- Bile duct carcinoma.

Epidemiology/Etiology (Fledman, M., Friedman, S.L. and M.H. Sleisenger(2002).

It includes

- Long standing sclerosing cholangitis (7%) (Fledman,M., Friedman, S.L. and M.H. Sleisenger(2002)
- Biliary atresia (Fledman, M., Friedman, S.L. and M.H. Sleisenger(2002)
- Biliary cirrhosis (Sheila Sherlock, 2002)
- Biliary dysplasia (10%)
- Intra hepatic cholelithiasis (Fledman, M., Friedman, S.L. and M.H. Sleisenger(2002)

- Post radio graphic contrast and medium Thoridium Dioxide (Fledman, M., Friedman, S.L. and M.H. Sleisenger(2002)
- X anitrypsin deficiency leads to Thorotrast related Cholangio carcinoma (Fledman,M., Friedman, S.L. and M.H. Sleisenger(2002)
- Common in older than young, between 50 & 60 years (Yamada Tadataka,(2009) Common in men than in women (Fledman,M., Friedman, S.L. and M.H. Sleisenger(2002)
- Colorectal neoplasia (Sheila Sherlock, 2002)
- Irritable bowel disease (10%)
- Assisted with typhoid career state to Hepato Biliary cancer according to New York Cancer Association
- More common in persons with Ulcerative Colitis than with general population (10%)

- Liver Fluke infestations (20%) due to
 - √ Clonorchis sinesis (parasite usually common in Hongkong, China, Japan.Korea by eating raw fish containing the larval stage of flukes (Yamada, 2009)
 - √ Opisthorchis viverrini common in Thailand, Laos, Western Malaysia –induces DNA changes and Mutation through the production of carcinogens, free radicals and stimulation of cellular proliferation of intra hepatic duct epithelium
 - √ Increased Nitrate levels in body fluids (Yamada Tadataka,(2009)
- After removal of Gall stones –unknown (Yamada Tadataka,(2009)
- Congenital fibro poly cystic conditions (Sheila Sherlock, 2002)
 - $\sqrt{}$ Congenital hepatic fibrosis
 - $\sqrt{}$ Cystic dilatation (Caroli's syndrome)
 - √ Choledocal cyst (10%) due to untreated anomalously high pancreatic duct-Bile duct junction (Fledman,M., Friedman, S.L. and M.H. Sleisenger(2002)
 - $\sqrt{}$ Polycystic liver (Sheila Sherlock, 2002)
 - √ von Meyenburg complex (Fledman,M., Friedman, S.L. and M.H. Sleisenger(2002)

Pathophysiology (Sheila Sherlock, 2002)

The confluence of cystic duct with main hepatic duct or the right and left main hepatic duct at the porta hepatics are common sites of origin. The tumor extends to liver. It causes complete obstruction of extra hepatic bile ducts with intra hepatic biliary dilatation and enlargement of the liver. The gall bladder is collapsed and flaccid. If the tumor is restricted to one hepatic duct, biliary obstruction is incomplete and jaundice absent. The lobe of the liver drained by obstructed duct atrophies. The other duct hypertrophies.

In the common bile duct, the tumor presents as a firm nodule or plaque which causes an annular stricture which may ulcerate. It spreads along the bile duct and through its wall. It also involves peritoneum, abdominal lymph nodes, diaphragm, liver and gall bladder. The tumor encircles the bile duct. Blood vessel invasion is rare and extra abdominal spread is unusual. Compression of the portal vein can lead to lobar atrophy. Histologically the tumor is usually mucus secreting adeno carcinoma with cuboidal or columnar epithelium and abundant fibrous stroma.

Spread along neural sheaths may be noted. Metastatic nodules distributed irregularly through out liver and radiates into hepatic tissue or a spongy friable mass within the lumen of the duct. Bile production is not seen. The tumor cells provoke a variable desmoplastic reaction and presents with collagenized stroma (Sheila Sherlock, 2002)

Clinical Features (Sheila Sherlock, 2002)

- Usually deep jaundice is present followed by pruritis. There is a point of distinction from primary biliary cirrhosis where itching usually comes first.
- Jaundice may be delayed if only one main duct is involved, so there is an increased Serum Bilirubin
- Pain in the epigastric region in one third of patients is seen.
- There may be diarrhea/ steatorrhea, weakness and weight loss
- It is associated with ulcerative colitis and long standing cholestasis due to sclerosing cholangitis
- They are afebrile at terminal stage
- The liver may be large, smooth, extending 5to 12 cm below costal margin.
- Spleen may not be palpable
- Ascites is unusual (Sheila Sherlock, 2002)

Investigations (Sheila Sherlock, 2002)

- Serum Biochemical findings
 - $\sqrt{}$ Increased Serum Bilirubin
 - $\sqrt{}$ Increased Alkaline Phosphatase
 - $\sqrt{}$ Increased Y Glut amyl Trans Peptide levels
- Serum Mitochondrial Antibody test Negative
- Alpha feto Protein not increased
- Feces may be pale, fatty, positive occult blood
- Glycosuria will be present

- Severe Anemia may be present
- WBC shows increased Leukocyte Count and Increased Polymorphs
- Cytology taken at Hepatic biopsy shows large bile duct obstruction
- Attempt for ERCP/ Percutaneous Drainage confirm bile duct obstruction
- Scanning
- USG shows Intra Hepatic Bile duct, echogenic tumor at hilum and extension in and around bile duct (80%)
- CT scan shows Intra Hepatic Biliary dilatation, isodensed tumor
- Enhanced CT- Hilar Cholangio Carcinoma high density map bile duct dilatation detects tumor (40-70%)
- Helical CT-detects Cholangio carcinoma tumor size as small as 15 mm in diameter, in 90% cases
- MR imaging useful to confirm bile duct stones, strictures (90%)
- Endoscopic Percutaneous Cholangio Graphy (ERCP)
- ERCP trans papillary forceps biopsy obstruction at hilum
- Endoscopic ultra sound to assess the extend of tumor at the lower end of the bile duct

- Percutaneous obstruction is blunt on nipple like dilated intra hepatic bile duct accurately
- Demonstrates filling defects of the mid bile duct due to a polypoid carcinoma

Prognosis (Sheila Sherlock, 2002)

Fatal but the tumor is slow growing and metastizes late so survival seems to the long. Mean survival 14.4 months to 5.6 years. The tumor kills by its site, making it inoperable rather than by its malignancy. Death is due to Hepato cellular failure and infection usually suppurative cholangitis and septicemia. Massive invasion of the liver by tumor or extra hepatic metastases rarely causes death. Prognosis depends on the site of tumor. Those distally placed are more likely to be resectable than those at the hilum. The histologically differentiated ones do better than the undifferentiated. Polypoid cancers have the best prognosis.

Staging (Sheila Sherlock, 2002)

Low Common Bile duct lesions are resectable and angiography, venography are needed to exclude vascular invasion. Hilar Cholangio Carcinomas are problematic especially when secondary hepatic duct is involved in both hepatic lobes, angiography confirms with encasement of main portal vein, hepatic



Courtesy: Amit Sunny Mittal, Baylor college of Medicine www.bcm.edu/osa/radilogy club



artery the lesion is resectable. A palliative procedure is needed. Lesion is resectable when the tumor is limited to hepatic duct bifurcation; affects one lobe of liver, only obstructs portal vein or hepatic artery.

Stage I – III Resectable tumor depends on angiographic findings

Stage IV Bilateral involvement of secondary hepatic duct – incurable disease

(Feldman, Friedman, 2002)

Treatment of Klatskin's Tumor

http://www.surgery.usc.edu/divisions/tumor/ p a n c r e a s d i s e a s e s / w e b % 2 0 p a g e s / BILIARY%20SYSTEM/cholangiocarcinoma.html

Surgery

The liver is made up of two lobes: a right lobe and a left lobe. One of the two lobes can be safely removed at surgery. Klatskin's tumors often invade the blood vessels called hepatic artery and the portal vein that supply blood flow to the liver. The goal of staging prior to surgery is to assess whether the blood vessels of the liver are free of the tumor. The location of proximal bile duct tumors sometimes makes this evaluation difficult and often the final decision regarding surgery is made at the time of exploratory surgery.

Complete removal of the tumor is the only effective and potentially curative treatment for cancers of the upper bile duct. The treatment usually requires a surgical procedure to remove the tumor in the bile duct together with one side of the liver due to the high frequency with which the tumor invades blood vessels of the liver.

A. Klatskin's tumors are removable if:

http://www.surgery.usc.edu/divisions/tumor/ p a n c r e a s d i s e a s e s / w e b % 2 0 p a g e s / BILIARY%20SYSTEM/cholangiocarcinoma.html



A, B. Surgical technique for Bilateral Hepato Jejunostomy with Roux-en-Y Anastamosis for the Removal of an Extra Hepatic Tumor

A, B. Surgical Technique for Unilateral Hepato Jejunostomy with Roux-en-Y Anastamosis and Left Hepatic Lobectomy





A, B. Surgical technique for bilateral Hepato Jejunostomy with Roux-en-Y and the removal of an extra hepatic tumor

Courtesy: images from qlum.blog.hexun.com

Blood supply to one side of the liver is not affected by the tumor

Klatskin's tumors are closely associated with liver and as they grow invasion into the blood vessels that supply blood to the liver is often found. If the blood supply to one side of the liver is free of tumor then the portion of the liver invaded by the tumor can be removed.

The bile duct to one side of the liver is free of tumor

Klatskin's tumors affect the portion of the bile duct in the liver. One or both side of the bile ducts in the liver may be affected.

B.Unresectable Klatskin's tumor:

Klatskin's tumor is unresectable if it invades the blood supply to both sides of the liver and/or the hepatic duct to the both sides of the liver therapy treatments is used. In general these tumors respond poorly to treatment. For Tumors of the middle third of Extra Hepatic duct, surgical options include Resection of the Mass possible primary End-to-End Bile duct Anastamosis (for early Small tumors) or Hepato Jejunostomy (If Large portion of Extra hepatic ducts should be removed)

Proximal tumors may be resectable by local or major liver surgery including Excision of the whole Bifurcation of the Common Bile Duct, Lobectomy, and Bilateral Hepato Jejunostomy. The liver may need to be split back to vena cava.

Early diagnosis of a peripheral Cholangio carcinoma is unusual and the tumor carries the poor prognosis. Resection is rarely possible, and the results of radiation therapy and chemotherapy are disappointing. For inoperable cases, biliary drainage must be established, usually be an endoscopic or radio graphic approach (Feldman, Friedman, 2002)

Palliative surgical procedures

Intubation of stricture with the use of hepatic tubes.

Anastamosis of jejunum to III segment duct in the left lobe which is usually accessible despite the hilar tumor.

Non Surgical Procedures

In patients who are with surgery or with unresectable tumors –placed Endo Prosthesis across the stricture either by Endoscopic or Percutaneous routes

Endoscopic stent

- 1. Complication
- i. Cholangitis (7%)
- ii. III day mortality (10-28%)

Mean Survival Rate – 20 weeks

Percutaneous Trans Hepatic Endo Prosthesis insertion.

Complication

- i. High risk for Puncture of Liver
- ii. Risk of bleeding
- iii. Bile leakage

Internal Radio Therapy -192 Iridium wire or Radium needle.

Implant with biliary drainage.

Cytotoxic drugs are ineffective.

External radio therapy -beneficial.

Symptomatic treatment for chronic cholestasis.

Hepatic Transplantation

- a. Recurrence of tumour is unusual.
- b. Given poor results (retrospective studies).

Post Operative Complications (reference) Major

- 1. Pneumonia
- 2. Hepatic insufficiency
- 3. Intra abdominal fluid collection
- 4. Intra abdominal bleeding
- 5. Myocardial infarction

Minor

- 6. Biliary leakage
- 7. Pleural effusion
- 8. Atelectasis
- 9. Urinary tract infection
- 10. Wound infection

Case history

47 years old, Mr Velusamy a land lord hailing from Coimbatore, a father of three sons, was admitted into Gastroenterology ward with the complaints of progressive abdominal distention over a period of one month, with pain in right upper quadrant. The pain was significant especially after consumption of food, decreased appetite, easy fatigability, loss of weight, 2 kg in a month and predominantly severe abdominal pain for 3 days prior to the admission. He was smoker and had consumed alcohol for one year after the death of his first wife. He weighs at 58kg. His BMI was 23.

Family history

Mr Velusamy's sons are studying in schools and colleges. They sustain from the income out of mortgage with their lands. He had a strong family history of Carcinoma. His father and uncle both died of lung and oral cancer respectively. is Hihi His wife died of breast cancer who was his first cousin.

Physical findings and laboratory investigations

Mr Velusamy had normal body build, moderately nourished with reduced activities. He was anxious, looking pale and the sclera was dark yellow in color. His abdominal girth measuring 98cm confirmed distention due to ascitis and thrill on ballottement. Ascitic fluid Protein was 3.37g/dl saying Hypoalbuminemia in diuretic stage but his Serum Protein levels were within normal limits. He had stent fixation markings and scar due to radiation therapy on his abdomen. His Alkaline Phosphatase was 549 U/L indicating an obstruction of biliary system. Paracentesis confirmed infection with 610 cells/ cu mm of total cell count. But, there was no significant change in the vital signs.

Ascitic fluid cytology report revealed that reactive mesothelial proliferation with the changes probably

due to previous radiation therapy. But no malignant cells were seen on the smear studied. Adenosine Deaminase Activity (ADA) of Ascitic fluid was within normal limits (8.7 U/L). Ultrasonograph of Abdomen showed no evidence of mass growth, mesothelial cells present in ascetic fluid.

Color Doppler study of Abdomen revealed that mass in Right Lobe of Liver extending to hila, stent in situ in common bile duct, mild intra hepatic biliary rigidity dilatation in left lobe, severe ascitis, normal inferior vena cava, hepatic vein and portal vein. He was diagnosed as Hilar Cholangio Carcinoma i.e., Klatskin's Tumor with Stenting and Post Radiation Therapy with Reactive Mesothelial Proliferation.

Past medical history

One year ago, Mr Velusamy had presented with yellowish sclera, loss of appetite and abdominal distention. He had taken native treatment with Keelanezhi herbal leaves. After, 6 months, he had another episode with the same symptoms with increased

Serum Bilirubin and Alkaline Phosphatase and was diagnosed as Obstructive Jaundice. Based on USG abdomen he was diagnosed as Hilar Cholangio Carcinoma. He was referred to Hepato Biliary Unit CMCH, Vellore for Surgical Management. There he was found have Liver Secondaries (Unresectable Tumor) since the growth extended to the under surface of the liver. He had been advised for Palliative Stenting followed by Radiation Therapy.

At Coimbatore, Endoscopic Retrograde Cholangio Pancreatography (ERCP) was attempted twice and precut was extended. Both pancreatic duct and bile duct were delineated and amount of bile flow was seen. It was difficult to negotiate the cannula up the bile duct suggested a long malignant stricture. Guide wire manipulation induced bleeding possibly due to tumor and hence the procedure was abandoned. It was planned to do Percutaneous Transhepatic Biliary Dilatation (PTBD) followed by external drainage.

Bile Duct Stent



Courtesy: images from Google search engine

PTBD was done with right lateral approach. Pig tail catheter was introduced and self retaining explainable Zilver stent 8 cm was placed in the right hepatic duct and crossing the stricture into duct with internal and external drainage. His condition had

symptomatically improved. Readmitted for PTBD assisted stenting after 2 months with icterus. USG Abdomen revealed Collapsed Left Ductal system. PTBD done on the Left side showed purulent material possibly due to underlying Cholangitis. Left duct was closed and right duct stent was present. Mr Velusamy was doing well so he was discharged with stent in Right duct system and referred to medical oncology. Radiation therapy was given at a Regional Cancer Centre for five sittings.

Treatment and nursing (Including Nursing Process)

- Pain related to underlying pathology as manifested by abdominal pain in right hypochondriac region after consumption of food
- Fluid volume excess related to extra vascular (ascitis) increased portal venous pressure, aldosterone imbalance as manifested by increased abdominal girth, ballottement and taut abdomen
- 3. Imbalanced nutrition less than body requirements related to decreased appetite as manifested lack of interest in consumption of food, inadequate food intake and loss of weight
- 4. Activity intolerance related to generalized weakness as manifested by verbal report of fatigue
- 5. High risk for impaired skin integrity related to increasing abdominal girth, taut shiny skin
- 6. High risk for infection related to diagnostic abdominal paracentesis

After 5 months, Mr Velusamy had presented with the above mentioned symptoms and hospitalized and suspected to have Veno Occlusive Disease. Therapeutic paracentesis was done twice as 300 to 400 ml per day. Liver enzymes were given along with symptomatic treatment. His abdominal girth had reduced from 98 to 95 cm. He experienced reduction in abdominal pain.

There were no dietary restrictions other than bland diet. During hospitalization, he was motivated to eat small, frequent food. He was given chance to prefer food items with a standard schedule. As far as possible, pleasant environment was provided. There was no change in his weight during stay. He was given reference to the dietitian before discharge. His wife was included in dietary counseling.

His fluid intake was reduced to 1.5 lit per day. He had positive balance of 100 to 200 ml. Salt intake was reduced to 4 gm per day. No diuretics were prescribed. He was given the maximum possible bed rest. His finger nails were trimmed and provided comfortable bedding. His vital signs were within normal limits. His activities were planned and clubbed together. His activities were gradually increased as he could tolerate. He was advised not to exert much but to monitor and control his activities. His WBC was within normal range. He had no other sign of infection. He was protected from other patients and health team who had infections.

Mr Velusamy and his wife were explained about the reason for recurrence of ascitis as it is due to radiation therapy 6 months ago, had caused mesothelial cell proliferation in the Liver Obstruction in the Biliary system. The stent placed would take care of biliary drainage. He was discharged because he was symptomatically better. But he needed regular USG abdomen and follow up once in 2 months which will help to evaluate stent placement periodically. It is mandatory to monitor Serum Bilirubin, Serum Protein, and Complete blood count. He was asked to monitor for ascitis and restrict sodium and water as advised during hospital stay. The client and his family were explained about poor prognosis.

Summary

Mr Velusamy experienced reduction in abdominal pain with normal bland diet, adequate bed rest and limited activities. His ascitis had reduced so he was discharged because prognosis was very poor. His nutritional status had improved. He was able to do his work within his capabilities. He had maintained normal skin integrity and had no signs of infection, the client and his family members were explained well about the prognosis.

Conclusion

Klatskin's tumor is the slow growing tumor. The carcinoma of liver when the origin is from bile duct.

It is called as Klatskin's tumor or Cholangio carcinoma. Mr Velusamy was discharged and instructed to come for follow up after 3 weeks. He is regularly coming for follow up.

References

- Sherlock Sheila, James Dooley. *Diseases of the liver* & *Biliary system*. 11th Edition, UK: Blackwell Publishing; 2002.
- Fledman M, Friedman SL and MH Sleisenger. Sleisinger and Fledman's Gastro Intestinal and Liver Disease, Pathophysiology, Diagnosis and Management. 2nd Volume, 8th Edition, Philadelphia: W B Saunders; 2002.
- Yamada Tadataka. *Text Book of Gastroenterology*. 2nd Volume, 5th Edition, UK: Wiley- Blackwell Publication; 2009.

- 4. Lewis SM, Heitkemper MM and Dirksin SR. Medical- Surgical Nursing Assessment and Management of Clinical Problems. St. Louis, Mosby: 2004.
- Smeltzer SC and Bare BG. Brunner and Suddarth's *Text Book of Medical – Surgical Nursing*. Philadelphia: Lippincott Williams; 2004.
- Carol Mattson Porth. Pathophysiology Concepts of Altered Health Status. Philadelphia: Lippincott Williams & Wilkins; 2002.
- Russell RCG, Williams Norman S et al. *Bailey & Love's Short Practice of Surgery*. 24th Edition, London: Arnold Publication; 2004.
- SC Eugene, SF Micheal and Willis C Maddrey. Sciff's Diseases of the Liver. Vol 1, 10th Edition, Philadelphia: Lippincott Williams & Wilkins; 2004.
- Townsend. Sabiston Textbook of Surgery, 18th Edition, Elseviers Publication; 2007.

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Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebocontrolled trial. J Oral Pathol Med 2006;35:540-7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. Acta Odontol Scand 2003;61:347-55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone iodine antisepsis. State of the art. Dermatology 1997;195 Suppl 2:3-9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. J Periodontol 2000;71:1792-801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2^{ed} edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovuo J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O, Kidd EAM, editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. p. 7-27.

No author given

[8] World Health Organization. Oral health surveys basic methods, 4 edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online – Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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