

PRINCIPLES OF PRE AND POSTOPERATIVE CARE

Introduction

The patient who consents to have surgery, renders himself dependent on knowledge, skills and integrity of health care team. The period extending from the time of hospitalization for surgery to the time of discharge is the perioperative period. It is essential to provide perioperative care to the patients during this phase. It includes care of patients prior to surgery, i.e. in preoperative phase, during surgery and then in postoperative phase.

Preoperative care

Perioperative care

Intraoperative care

Postoperative care

Preoperative Care

Preoperative phase is the period in which patient is to be prepared both emotionally and physically for surgery.

There are specific principals which must be followed during this phase.

Principles of Emotional Preparation in Preoperative Phase

1. Assess and correct psychological problems of the patient, that may increase the surgical risk.
2. significant others should be explained in detail about every aspect of surgery.
3. Management of fears related to surgery is essential. Nurses must recognize these fears in children as well as parents and deal with them properly.
4. Parents and child (patient) should be given opportunity to describe their reactions and feelings.
5. Nurses should be honest and truthful while answering questions of parents and children The questions that should not be answered or the nurse is unable to answer should be referred to physician
6. The parents and child should be oriented to the recovery room, postoperative ward and the equipment there, as the child will be kept there, after surgery.
7. The parents and child should be prepared for discharge in preoperative period.

8. Good communication between all the members of health care team and patient will ensure that patient is well prepared and ready to undergo surgery.

Principles of Physical Preparation in Preoperative Phase

Doctor's orders for preoperative care are to be implemented.

1. Enema is to be administered the night before surgery, if ordered. Cleansing the colon of fecal matter helps in reducing chances of wound infection during surgery involving bowel.

2. Follow the physician's orders for diet. Usually patients are to be kept NPO from midnight onwards before surgery.

3. Bath should be given to the child in the morning to make the skin free of microorganisms. This helps in reducing the possibility of postoperative infection.

4. Make the child wear clean hospital gown after bath.

5 Legal consent must be signed by the guardians of the child.

6 All the laboratory reports should be attached to the patient's file and sent with patient

7. Vital signs should be checked and recorded in patient's file.

8) Administer preoperative medication as prescribed by the doctor.

9. Send the child to the OT with identification band tied on wrist to prevent any fault in identification of the patient.

Preoperative Teaching Principles

Children and their parents should be taught those postoperative practices that they will need to do and their role in preventing complications. These postoperative practices include the following

(a) Turning: Turning in bed and early ambulation helps in maintaining blood circulation, stimulates respiratory functions and decreases stasis of gas in the intestines. Parents should be instructed to turn the patient and help in early ambulation.

(b) Deep Breathing: It helps prevent post-operative pneumonia and atelectasis Child if able to understand should be taught to inhale slowly through nose and exhale slowly through pursed lips.

(c) Coughing: Coughing is done to mobilize and expel secretions collected in respiratory tract which If not removed may lead to pneumonia. The child should be made to sit, take deep breath

and then cough strongly. During coughing a small pillow may be held tightly across incision so as to minimize pain.

(d) Extremity Exercises: These exercises done actively or passively, help in preventing circulatory problems such as thrombophlebitis, by facilitating venous return to the heart.

Postoperative Care

Surgery causes physiological stress on the body.

The principles of safe and effective postoperative care include recognizing hypovolemia, maintaining fluid and electrolyte balance, maintaining oxygen saturation in body, managing pain and preventing postoperative complications. All these measures are essential elements of postoperative nursing care.

A. Immediate Postoperative Care

- 1) An operation bed** should be kept ready to receive the patient after surgery.
- 2) As soon as the patient is shifted in recovery room**, monitor the indicators of hemodynamic stability including Blood Pressure, Peripheral oxygen saturation, Heart rate, Respiration and temperature
- 3) Maintain patent airway** by keeping the child in side lying position.
- 4) If required suction airway** to remove the secretions.
- 5) Administer oxygen** if peripheral oxygen saturation is below 90%. Providing oxygen to the patient on reversal of anesthesia encourages transport of anesthetic gases across alveolar/capillary membrane in the lungs and then out of the body. Supplemental oxygen is also required because of increased metabolic rate caused due to surgery.
- 6) Replacement of fluids** in postoperative period is essential to ensure adequate hydration of the body.
- 7) Maintain intake and output chart.**
- 8) Restrain the child** to prevent any injury and dislodging of IV tubes, drainage tubes, dressings, etc.
- 9) Pain following surgery** is inevitable for children. Good pain management can help reduce postoperative complication. Administer the prescribed analgesic
- 10) Check the drainage tubes**, if any.
- 11) Ensure that guardians** are with the child in recovery room.

12)Keep patient nil per orally till he regains consciousness.

B. Care after 24 hours of Surgery

- (1) Keep monitoring the vital signs.
- 2)Observe the patient for hydration status, intake and output, any drainage from surgical site, dressing on surgical site, return of bowel sounds and level of consciousness.
- 3) Administer the medications like antibiotics and analgesics as prescribed by the physician.
- 4)Dressing of operative site should be done using strict aseptic techniques.
- 5)Provide IV fluids till paralytic ileus disappears and bowel sounds return. Start with sips of water after peristalsis begins.
- 6)Maintain the personal hygiene of the child.
- 7)Ensure adequate rest, sleep and comfort.
- 8)Simple nursing interventions like early ambulation and active or passive exercises help in reducing the risk of postoperative complications like atelectasis, deep vein thrombosis, pneumonia, pressure ulcers, constipation, etc.
- 9)Provide diversion therapy to the child.
- 10) Plan for discharge from hospital and teach parents regarding home based care, diet, medications and follow-up.
- 11)Provide complete details of all the investigations, treat
- 12)Provide complete details of all the investigations, treatment, surgical procedure done and follow-up care to the parents.

DIFFERENCE BETWEEN AADULT AND CHILD

SR NO		CHILD	ADULT
1	Definitions of Adult and Child: .	Child: A child is a young human being under the age of 18.	Adult: An adult can be understood as a fully grown person
2	Characteristics of Adult and Child: Age:	Child: A child is under the age of 18.	Adult: An adult is over 18
3	<u>Decisions:</u>	Child: A child cannot take serious decisions by himself.	Adult: An adult can take serious decisions by himself.
1	ANATOMIC AND HYSIOLOGICAL DIFFERENCE	Size and weight are different according to age Newborn head is larger and heavier as compared to his body	Size and weight are different according to age No large and heavy as compared to his body
2	Systemic difference		
	1) Integumentary system	The apocrine swat gland found in axillae, areolae and genital area are small and nonfunctioning from birth to preschool years. They start functioning at the age of 8 to 10 years of child. Some common problem in infant and children are leiners disease,sclerema neonatrum	These skin problem do not occur in adult
	2) Respiratory system	Fetal lung no function except metabolism till extra uterine respiration occurs. The alveolar sac is shallow in neonates and dead air space is large, so more air must be move in and out of	Resp tissue and sufficient mucous produce in adulthood period

		<p>the lung .this is reason in child respiration rate increase</p> <p>During infancy tissue of resp tract are delicate and do not produce sufficient mucous</p>	
	Heart and circulatory system	After birth , when newborn is separated from placenta , respiration begins start changes occurs in heart	
	Hematological system	RBCs of newborn are quite different also life span in neonate is appr. 60-80 day	100-120day life span of RBC in adult
	Fluid and electrolytes	Total body water in infant about 750ml/kg body weight	Adult it is 550 ml/kg body weight
	Psychological difference	Psychological reaction in various age group infant and children are better patients	There is no ptiens because live in present , easily forgetting past, their attentions span is short due to these reason it is easily to divert the mind