



Objectives

Risk factor

Types of pathology

Types of surgery

Complication of their management.

Objectives:

Postoperative complication (morbidity) account for :

- 1-considerable human pain and suffering .
- 2- increase cost of health care.
- 3- can lead to postoperator death .

So , objectives are:

- λ accept that complication are best anticipated and avoided .
- λ recognize the incidence of co morbidity .
- λ understand the importance of matching procedure to the associated risk.
- λ appreciate importance of recognizing the importance complication early and treating them vigorously .

Risk factors :

Can be generally applicable to procedures or specific to the operation :

- λ age both extreme (very young and very old) .
- λ obesity.
- λ co-morbid condition .
- λ cardiovascular diseases .
- λ respiratory diseases .
- λ DM .
- λ renal disease.
- λ metabolic factor .
- λ infection .
- λ Wound healing .
- λ peripheral vascular disease.

Drug therapy (concurrent drugs used) :

- ♣ steroid –immunosuppressant antibiotics .
- ♣ blood transfusion .

Types of pathology :

- λ obstructive jaundice .
- λ neoplastic disease.

Types of surgery:

- λ Minimally invasive surgery .
- λ orthopedic surgery .
- λ gynecology.
- λ thoracic and upper abdominal surgery .
- λ prolonged operation.



Complication and their management

Complication of surgery may broadly be classified as those :

- 1- due to anesthesia .
- 2- due to surgery .

Due to anesthesia :

the anesthesia depends up on the mode (general , regional and local) and type of anesthetics (the anesthetic agent toxicity).

Complications of anesthesia :

A- Local anesthesia :

- ♣ **Injection site :**
Pain , hematoma , nerve damage , infection .
- ♣ **Vasoconstrictors :**
Ischemic necrosis .
- ♣ **Systemic effect of LA (local anesthesia) agent :**
Allergic reactions , toxicity .

B- Spinal , epidural and caudal anesthesia :

- ♣ **Technical failure.**
- ♣ **Headache due to loss of CSF .**
- ♣ **Intracranial bleeding .**
- ♣ **Permanent nerve or spinal cord damage .**
- ♣ **Paraspinal infection .**
- ♣ **Systemic complications (severe hypotension) .**

C- General anesthesia :

- ♣ **Direct trauma to mouth or pharynx .**
- ♣ **Slow recovery from anesthesia due to drug interactions or inappropriate choice of drug or dosage.**
- ♣ **Hypothermia due to long operation with extensive fluid replacement OR cold blood transfusion .**

Allergic reactions to the anesthetic agent :

- ♣ **Minor effects :**
e.g. postoperative nausea and vomiting .
- ♣ **Major effects :**
e.g. Cardiovascular collapse , respiratory depression .
- ♣ **Hemodynamic problems :**
Vasodilation & shock .

Complications of Surgery :

Specific (procedure related) :

- ♣ **Perioperative**
Hemorrhage , organ damage , electrocautery related , etc .
- ♣ **Postoperative complication : which may be considered under 2 headings :**
I. Immediate or early . II. Late .



Immediate or early postoperative complications :

- ♣ **Respiratory :**
 - Collapse , consolidation , aspiration .. etc .
- ♣ **Cardiovascular :**
 - Hemorrhage (primary , reactionary , secondary) .
 - Shock (hypovolemic , septic , cardiogenic , neurogenic) .
 - Myocardial infarction (>40 yrs) .
 - Deep venous thrombosis .
- ♣ **Thromboembolic :**
 - ✦ **Septic :**
 - Wound , abscess collections .
- ♣ **Gastrointestinal :**
 - Intestinal obstruction .
 - Anastomotic leakage , intra-abdominal abscess formation , enterocutaneous fistulae .
- ♣ **Wound complications :**
 - Infection , dehiscence ,etc .
- ♣ **Renal :**
 - Oliguria , acute RF .
- ♣ **Hepatic :**
 - Jaundice , hepatocellular dysfunction , insufficiency .
- ♣ **Cerebral :**
 - Psychological , neuropsychiatric complications (delirium , etc) .
- ♣ **Drug –related :**
 - Anesthetic , antibiotic , special medical diseases treatment toxicity .
- ♣ **Nerve Injury :**
 - Compression , traction , cautery , severed , etc .

Late postoperative complications :

- ♣ **Wound :**
 - Hypertrophic scar , keloid , wound sinus , implantation , dermoids , incision , hernia .
- ♣ **Adhesion :**
 - Intestinal obstruction , strangulation .
- ♣ **Altered anatomy / pathophysiology :**
 - Bacterial overgrowth , short gut syndrome , postgastric surgery syndrome .
- ♣ **Susceptibility to other diseases :**
 - Malabsorption , incidence of cancer , tuberculosis , etc .