Kenya medical training college- Nyeri campus
Subject :Surgery
Year 2 semester 1
Topic : Classification of surgical conditions

G. Weru

Introduction

Surgical conditions/procedures can be categorized by:

1. Urgency/timing
2. Purpose
3. Type of procedure
4. Body system involved
5. The degree of invasiveness
6. Special instrumentation

Timing/urgency

i. **Elective surgery**

- Done to correct a non-life threatening condition
- Carried out at patient's request
- Subject to the surgeon's and surgical facility's availability

timing cont.

ii. Semi elective surgery

- Must be performed to avoid permanent disability or death
- But can be postponed for a short time

iii. Emergency

- Performed promptly to save life, limb or functional capacity

Purpose

i. **Exploratory surgery**

- Performed to aid or confirm diagnosis

ii. **Therapeutic surgery**

- Performed to treat a previously diagnosed condition

iii. **Cosmetic surgery**

- Performed to subjectively improve appearance or otherwise normal structure

Procedure

i. **Amputation**

- Involves cutting off a body part, usually a limb or digit

ii. **Resection**

- Removal of all of an internal organ or body part, or key part (lung lobe, liver quadrant)

procedure cont.

iii. Excision

- Cutting out or removal of only part of an organ, tissue or other body part of a person.
- Surgical removal of a lesion e.g. a tumour

iv. Extirpation

- Complete excision or surgical destruction of a body part

v. Replantation

- Involves re-attaching a severed body part

procedure cont.

vi. Reconstructive surgery

- Involves reconstruction/repair of an injured, mutilated or deformed part of the body

vii. Transplant surgery

- Replacement of an organ or body part by insertion of another from different human (or animal) into the person undergoing surgery e.g. kidney transplant

By body part

- When surgery is performed on one organ system or structure, it may be classed by the organ, system or tissue involved. Examples include:

➢ **Cardiac surgery-** performed on the heart

➢ **Gastrointestinal surgery-** performed in digestive tract and its accessory organs

➢ **Orthopaedic surgery-** performed on bone or muscles

➢ **Ophthalmic surgery-** performed on the eyes

Degree of invasiveness

i. **Open/ invasive surgery**

- Require large incision to reach area of interest e.g. laparotomy

ii. **Minimally- invasive surgery**

- Involves smaller outer incision(s) to insert miniaturized instruments within a body cavity e.g. laparoscopic surgery or angioplasty

Equipments used

i. **Use of scalpel or scissors** and other similar instruments

ii. **Laser surgery**

- Involves use of laser for cutting tissues instead of scalpel

iii. Microsurgery

- Involves use of an operating microscope for the surgeon to see small structures

equipments used cont.

iv. Robotic surgery

- Makes use of surgical robot such as **Da Vinci** or the **ZEUS robotic surgical system** to control the instrumentation under the control of the surgeon

Surgery sub-divisions

1. **General surgery:**

- Is the broadest surgical division
- Focuses on surgery of the abdomen, the breast, and the endocrine organs

2. **Neurosurgery:**

- Involves operations on the brain & spinal column
- These procedures include excising, or cutting out, brain tumours and removing ruptured discs in the spine, an operation known as laminectomy.

Cont.

3. Orthopaedic surgery:

- Entails operations on bones, muscles, and joints.
- Orthopaedic surgery allows for the replacement of hip and knee joints with artificial joints made of special metals and plastics
- Fractures in bones are repaired with the implantation of pins, metal plates, and screws
- These techniques greatly reduce the time needed for healing and recuperation.

Cont.

4. Plastic surgery:

- Encompasses cosmetic procedures to improve appearance and reconstruct damaged parts of the body such as skin and underlying muscle
- Cosmetic procedures include enlarging or reducing the size of the breasts; rhinoplasty (cosmetic surgery of the nose); face lift (cosmetic surgery to tighten facial tissues); and blepharoplasty (cosmetic surgery on the eyelids).

Cont.

5. Cardiothoracic surgery:

- Deals with surgery of the lungs, chest wall, heart, and large blood vessels of the chest
- Typical procedures include the removal of malignant cancers and correction of structural birth defects in the heart, lungs and chest.