



**Kenya medical training college- Nyeri campus**

**Subject :Surgery**

**Year 2 semester 1**

**Topic : Introduction to surgery**

**G .Weru**

# Surgery



# Objectives

By the end of this lesson, the learner should be able to:

- Define surgery
- Describe surgical terminologies
- Discuss history taking and examination of a surgical patient (clerkship)
- Classify surgical conditions
- Describe body's metabolic and endocrine response to injury and surgery
- Identify medical conditions that affect surgical treatment

# Definition

- A medical speciality that uses operative manual and instrumental techniques on a person to investigate or treat a pathological condition such as disease or injury, to help improve bodily function or appearance or to repair unwanted ruptured area

## definition cont.

- An invasive technique with fundamental principle of physical intervention on organs, body systems or tissues for diagnostic and therapeutic reasons
- The act of performing surgery may be called **'surgical procedure', 'operation' or 'simply surgery'**

## Cont.

- Surgery is an art or craft as well as a science.
- It involves making judgment, coping under pressure, taking decisive action when necessary, and teaching & training skills

# Terminologies

## Terminologies related to procedures:

<u>SURFIX</u>	<u>MEANING</u>	<u>EXAMPLES</u>
Otomy	A cutting or an incision	Craniotomy, Arthrotomy, osteotomy
Ectomy	Removal of;	Appendicectomy, mastectomy
Orrhaphy	Repair of;	Herniorrhaphy
Plasty	Plastic repair of; molding	Rhinoplasty, arthroplasty
Pexy	Fixation or suspension	Rectoplasty, orchidopexy
Ostomy	Formation of opening or fistula	Colostomy, ileostomy

# Terminologies cont.

## SURFIX

## MEANING

## EXAMPLES

Oscopy

Looking into with an instrument;

Bronchoscopy, laryngoscopy

Desis

Surgical fusion of;

Arthrodesis

Centesis

To puncture and remove fluids

Paracentesis, thoracocentesis

Clysis

To force fluid

Cystoclysis



## Terminologies cont.

- **Amputation:** surgical removal of a limb or body part
- **A fistula**
  - Implies a tunnel connecting two epithelial surfaces.
- **A sinus**
  - Is a blind track opening on to the skin or a mucous surface
  - A fluid may discharge from a sinus or fistula.
  - The discharge should be examined and noted: is it blood, blood-stained, clear, bile-like, serous, faecal or purulent
  - The type of fluid may give a clue to the possible diagnosis.

## Terminologies cont.

- **Lymphangitis**

- Is inflammation within a lymphatic vessel and appears as a red line often leading to an inflamed regional lymph node

- **Thrombophlebitis**

- Is a thrombosed and inflamed vein – it is more usual in superficial veins often associated with varicose veins, which are tender and hard.

# Terminologies cont.

## ▪ Cellulitis

- Is a spreading inflammation of tissues, usually superficial or subcutaneous tissue due to bacterial infection, usually beta haemolytic streptococci or staphylococci
- The part affected is swollen, tense and tender.
- Later it becomes red, shiny and boggy.
- It may progress to an abscess, which is the presence of pus in the tissue concerned.

# Terminologies cont.

## ■ Crepitus

- Is a term used in a variety of conditions but in each having a fundamental diagnostic importance
- Bone crepitus is noted as coarse grating on movement of a bone – it is very painful to the patient, and an unmistakable diagnosis of a fracture of a bone
- Joint crepitus is elucidated by one hand on a joint and passively moving the joint with the other hand: fine, evenly spaced crepitations are present in many sub acute and chronic joint conditions.

## Terminologies cont.

- Coarse, irregular crepitations signify osteoarthritis
- The crepitus of tenosynovitis is found over an inflamed tendon sheath when effusion has occurred into the sheath
- The crepitus of subcutaneous emphysema is due to gas in the tissues; a peculiar crackling sensation is imparted to the examining fingers.

## Terminologies cont.

- **Translucency/Transillumination**
- There are occasions when swellings containing clear fluid lie adjacent to the skin.
- When a torch is shone through the swelling it lightens the area, confirming translucency.

## Terminologies cont.

- **Fluctuation/flatuancy**

- Is a specific term to elucidate the presence of fluid
- Two watching fingers are placed on either side of a swelling and a central displacing finger presses momentarily
- An impulse is felt by the watching finger confirming the presence of fluid

# Terminologies related to organs

ROOT	MEANING
Arthro	Joint
Adeno	Gland
Chole	Related to bile
Cholecysts	Gallbladder
Oophor	Ovary
Procto	Rectum
Rhino	Nose
Mast	Breast
Colpo	Related to vagina
Entero	Intestines
Hystero	Uterus



# Terminologies cont.

ROOT	MEANING
Osteo	Bone
Chondro	Cartilage
Salpingo	Fallopian tube
Laparo	Flank; abdominal wall
Phlebo	Vein
Pyelo	Renal pelvis
Ophthalmo	Eye
Orchi/orchio/orchido	testis
Urethro	urethra
Cysto	Urinary bladder
Hepato	Liver

# Terminologies cont.

ROOT	MEANING
Nephro	Kidney
Uretero	Uretus
Ano	Anus
Cholangio	Bile ducts
Myo	Muscle
Gastro	Stomach
Duodeno	Duodenum
Oesophago	Oesophagus

# Quiz

## Question 1

Mr. Pondamali has suffered wet gangrene of his left leg following a snake bite.

- What operation should he undergo to remove the gangrenous limb?

## Question 2

A patient suspected to be suffering from cancer of the colon should undergo \_\_\_\_\_ so as to visualize the lesion.

## Question 3

Miss Candy suffered penetrating abdominal injury that injured her rectum, after surgical repair of the rectum, the surgeon should introduce a temporary \_\_\_\_\_ to divert faeces through the abdominal wall.

## Quiz cont.

### Question 4

A patient suffering from fourth degree haemorrhoids should be scheduled for an elective \_\_\_\_\_ to surgically remove the haemorrhoids.

### Question 5

Mr. Peck sustained major pelvic fractures following a fall from height which ruptured his urethra.

- Which plastic surgery should he undergo to repair the injured urethra?

## Quiz cont.

### Question 6

John is suffering from testicular torsion of his right testis. After untwisting the spermatic cord, the surgeon should surgically fix (anchor) both testes to prevent recurrences.

- This procedure is referred to as \_\_\_\_\_

### Question 7

Ivan has been admitted in surgical ward through the Surgical Out-patient Clinic with an indirect inguinal hernia.

- He is scheduled to undergo \_\_\_\_\_ to repair the defect

## Quiz cont.

### Question 8

Partial removal of the stomach in a patient with peptic ulcers not responding to medications is referred to as partial:

- (a) Gastrostomy
- (b) Gastrectomy
- (c) Gastroscopy
- (d) Gastric amputation

## Quiz cont.

### Question 9

Making an incision into a joint to remove pus from a joint is referred to as:

- (a) Arthrectomy and drainage
- (b) Arthroscopy and drainage
- (c) Arthrotomy and drainage
- (d) Arthrodesis and drainage

## Quiz cont.

### Question 10

As an intern Clinical Officer you can perform\_\_\_\_\_ to collect peritoneal fluid for laboratory analysis in a patient with ascites.

- (a) Laparotomy
- (b) Peritonectomy
- (c) Paracentesis
- (d) Paraclysis