

Lec :2

2<sup>nd</sup> course

surgery

# ULCER SINUS FISTULA

د. بشار هادي الأعرجي

# Definition

## ulcer

- ▶ A break in the epithelial continuity
- ▶ Discontinuity of the skin or mucous membrane which occurs due to the microscopic death of the tissues

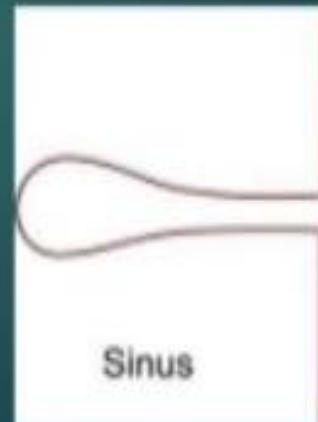
# Aetiology

- ▶ Venous Disease (Varicose Veins)
- ▶ Arterial Disease ; Large vessel (Atherosclerosis) or Small vessel (Diabetes)
- ▶ Arteritis : Autoimmune (Rheumatoid Arthritis, Lupus)
- ▶ Trauma
- ▶ Chronic Infection : TB/Syphilis
- ▶ Neoplastic : Squamous or BCC, Sarcoma

# DEFINITION

## SINUS.

- Blind track lined by granulation tissue leading from epithelial surface down into the tissues.
- Latin: Hollow (or) a bay



# CAUSES

## CONGENITAL

Preauricular sinus

## ACQUIRED

TB sinus

Pilonidal sinus

Median mental sinus

Actinomycosis

## FISTULA

- ABNORMAL communication between lumen of one viscus and lumen of another (**INTERNAL FISTULA**)

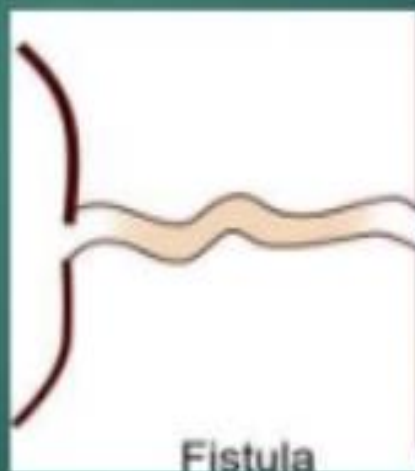
(or)

between lumen of one hollow viscus to the exterior (**EXTERNAL FISTULA**)

(or)

between any two vessels

Latin : flute (or) a pipe (or) a tube





# CAUSES

## CONGENITAL

- Branchial fistula
- Tracheo-esophageal
- Umbilical
- Congenital AV fistula
- Thyroglossal fistula

## ACQUIRED

- I. Traumatic**
- II. Inflammatory**
- III. Malignancy**
- IV. Iatrogenic**



# ACQUIRED

## I. TRAUMATIC:

(A) following surgery : eg., intestinal fistulas  
(faecal,biliary,pancreatic)

(B) following instrumental delivery (or) difficult  
labour

e.g., vesicovaginal,rectovaginal,  
ureterovaginal fistula

## **II. INFLAMMATORY:**

Intestinal actinomycosis, TB

## **III. MALIGNANCY:**

when growth of one organ penetrates into the nearby organ.

e.g., Rectovesical fistula in carcinoma rectum

## **IV. IATROGENIC:**

Cimino fistula- AVF for hemodialysis

ECK fistula- to treat esophageal varices in portal HTN

# FISTULA

## EXTERNAL

- Orocutaneous
- Enterocutaneous
- Appendicular
- Thyroglossal
- Branchial

## INTERNAL

- Tracheo-esophageal
- Colovesical
- Rectovesical
- AVF
- Cholecystoduodenal

## Causes for persistence of sinus (or) fistula

- Presence of a foreign body. e.g., suture material
- Presence of necrotic tissue underneath. e.g., sequestrum
- Insufficient (or) non-dependent drainage.  
e.g., TB sinus
- Distal obstruction. e.g., faecal (or) biliary fistula
- Persistent drainage like urine/faeces/CSF
- Lack of rest

[contd.]

➤ Epithelialisation (or) endothelialisation of the track. e.g.,  
AVF

- Malignancy.
- Dense fibrosis
- Irradiation
- Malnutrition
- Specific causes. e.g., TB, actinomycosis
- Ischemia
- Drugs. e.g., steroids
- Interference by the patient



# CLINICAL FEATURES

Usually asymptomatic but when infected manifest as-

- Recurrent/ persistent discharge.
- Pain.
- Constitutional symptoms if any deep seated origin.

# CLINICAL EXAMINATION

## INSPECTION:

1. **Location:** usually gives diagnosis in most of the cases.

**SINUS:** pre-auricular- root of helix of ear.  
median mental- symphysis menti.  
TB- neck.

**FISTULA:** branchial- sternomastoid ant border.  
parotid- parotid region  
thyroglossal- midline of neck below hyoid.





2. Number: usually single but multiple seen in HIV patients (or) actinomycosis.

3. Opening:

- a) sprouting with granulation tissue-foreign body.
- b) flushing with skin- TB

4. Surrounding area:

erythematous- inflammatory

bluish- TB

excoriated- faecal

pigmented- chronic sinus/fistulae.

## 5. Discharge:

- White thin caseous, cheesy like- TB sinus
- Faecal- faecal fistula
- Yellow sulphur granules- actinomycosis
- Bony granules- osteomyelitis
- Yellow purulent- staph. infections
- Thin mucous like- brachial fistula
- Saliva- parotid fistula

# Palpation:

- a) **Temperature and tenderness:**
- b) **Discharge:** after application of pressure over the surrounding area.
- c) **Induration:** present in chronic fistulae/sinus as in actinomycosis, OM

**TB Sinus induration absent.**

**d) Fixity:**

**e) Palpation at deeper plane:**

lymph nodes- TB

Thickening of bone underneath- OM

# INVESTIGATIONS

- **CBP**- Hb, TLC, DLC, ESR.
- **Discharge** for C/S , AFB, cytology, Gram staining.
- **X-RAY of the part** to rule out OM, foreign body.
- **X-RAY KUB and USG abdomen** in cases of lumbar fistula to rule out staghorn calculi.
- **MRI**
- **BIOPSY** from edge of sinus
- **CT Sinusogram**



## ➤ FISTULOGRAPHY/ SINUSOGRAPHY:

- For knowing the exact extent/origin of sinus (or)fistula.
- Water soluble or ultrafluid lipoidal iodine dye is used.
- Lipoidal iodine is poppy seed oil containing 40% iodine.




# TREATMENT

## **BASIC PRINCIPLES:**

- Antibiotics
- Adequate rest
- Adequate excision
- Adequate drainage.



- 
- After excision specimen **SHOULD** be sent for HPE.
  - Treating the cause.
    - e.g., ATT for TB sinus.
    - removal of any foreign body.
    - sequestrectomy for OM.

HPE: Histo- Pathological- Examination  
ATT : Anti- Tuberculous- Therapy

thank you!