HAEMORRHOIDS, FISSURE & FISTULA-IN-ANO

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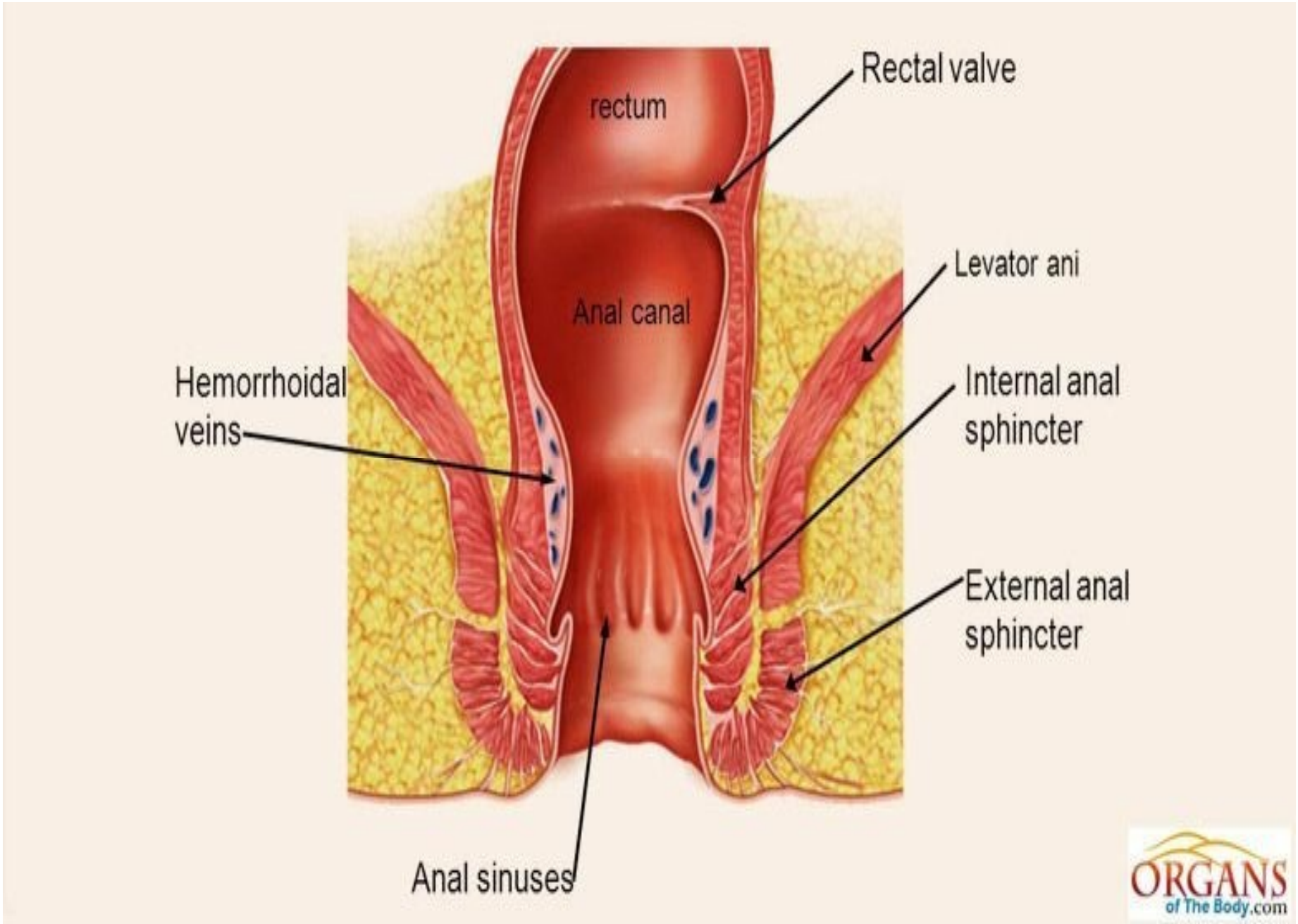
Haemorrhoids

- Derived from the Greek word “Haima” (bleed)+”Rhoos”(flowering)
- Pile - derived from the Latin word ‘Pila’, which means – Ball.
- It is the abnormal downward sliding of anal cushions due to straining, characteristically seen in 3,7 and 11 oclock positions.


rectum
Rectal valve
Anal canal
Levator ani
Hemorrhoidal veins
Internal anal sphincter
External anal sphincter
Anal sinuses
ORGANS of The Body.com

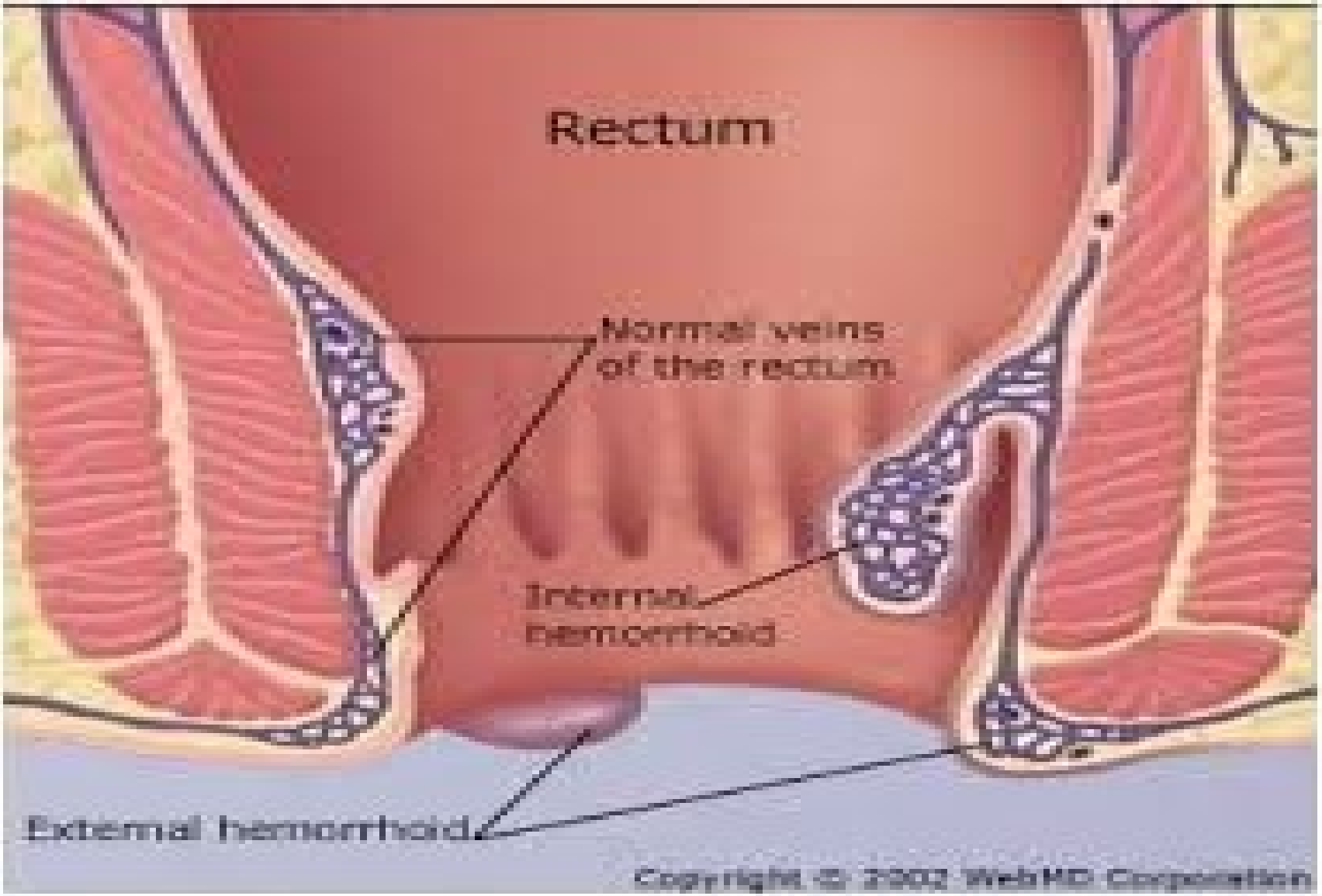
Aetiology

- Hereditary
- Morphological
- Superior rectal veins have no valves
- Contraction of veins above muscular layer increases congestion lower rectum
- Straining, constipation ,CA rectum, pregnancy(increased progestone)
- Disruption of suspensory tissues

Types :

- Internal
  - 3, 7, 11 o'clock
- External
  - related to venous channels of the inferior haemorrhoidal plexus, surrounding anal verge.
  - Not true
  - Result of painful solitary thrombosis(sentinel)
- Intero-external
  - Both

Hemorrhoids



Classification

1) Primary haemorrhoids

– Related to branches of sup. Haemorrhoidal vessel

Secondary heamorrhoids

– Occurs b/w primary sites

2)Golliger's Classification

1st degree :piles within that may bleed but don't come out

2nd degree :prolapse during defecation but returns spontaneously

3rd degree :prolapse but replaced manually

4th degree: Permanently prolapsed

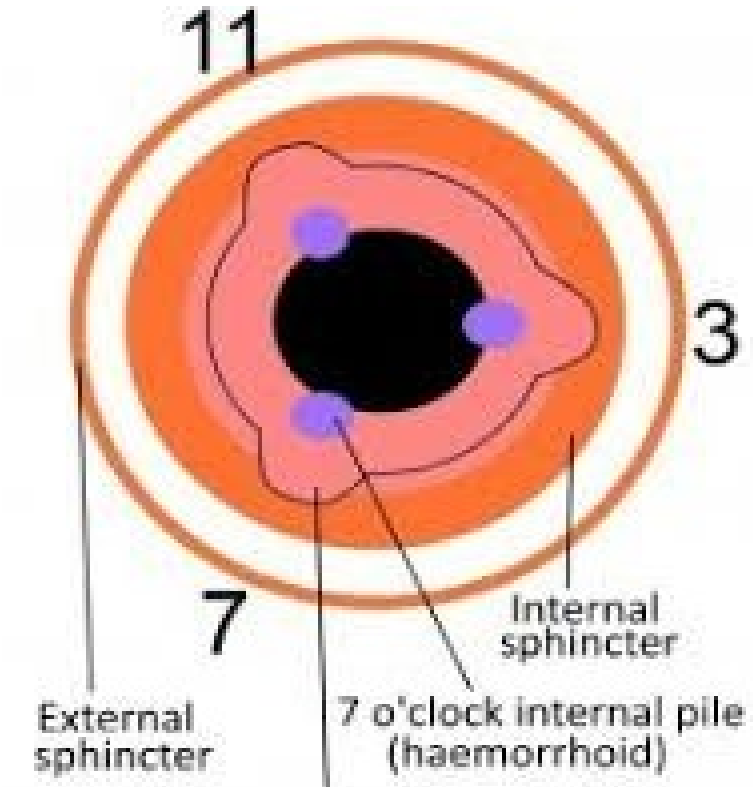


Fig 8 Haemorrhoids, piles and skin tags

- Incidence M:F 1:1
- Bleeding ‘splash in pan’ bright red
- Mass per annum
- Discharge – mucoid
- Pruritus
- Pain
- Anaemia

Examination

P/R

- Only thrombosed piles can be felt

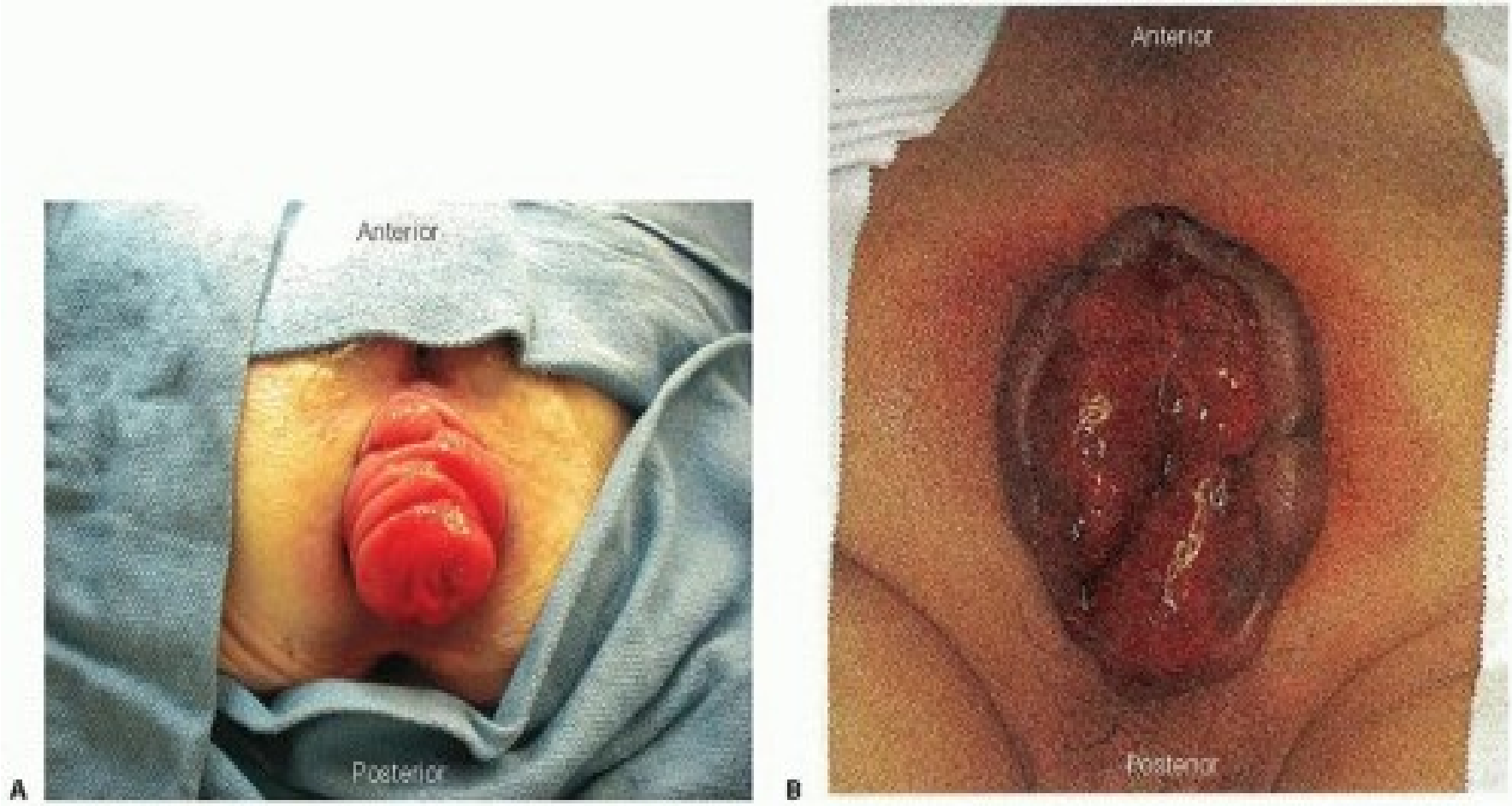
Proctoscopy: Bulge seen at position of pile
Presence of any mass or discharge

Differential Diagnosis :

- CA rectum
- Rectal prolapse
- Perianal wart

Complications

- Bleeding
- Thrombosis
- Prolapse
- Ulceration
- Abcess formation
- Pylephlebitis (Portal pyemia) rare, can occur after surgery


Anterior
Posterior
A
Anterior
Posterior
B

- Chronic fissure:
  - Lasting more than 8 to 12 weeks
  - Edema and fibrosis
  - Sentinel pile (Skin tag) at distal fissure margin
  - Hypertrophied anal papilla in proximal to fissure.

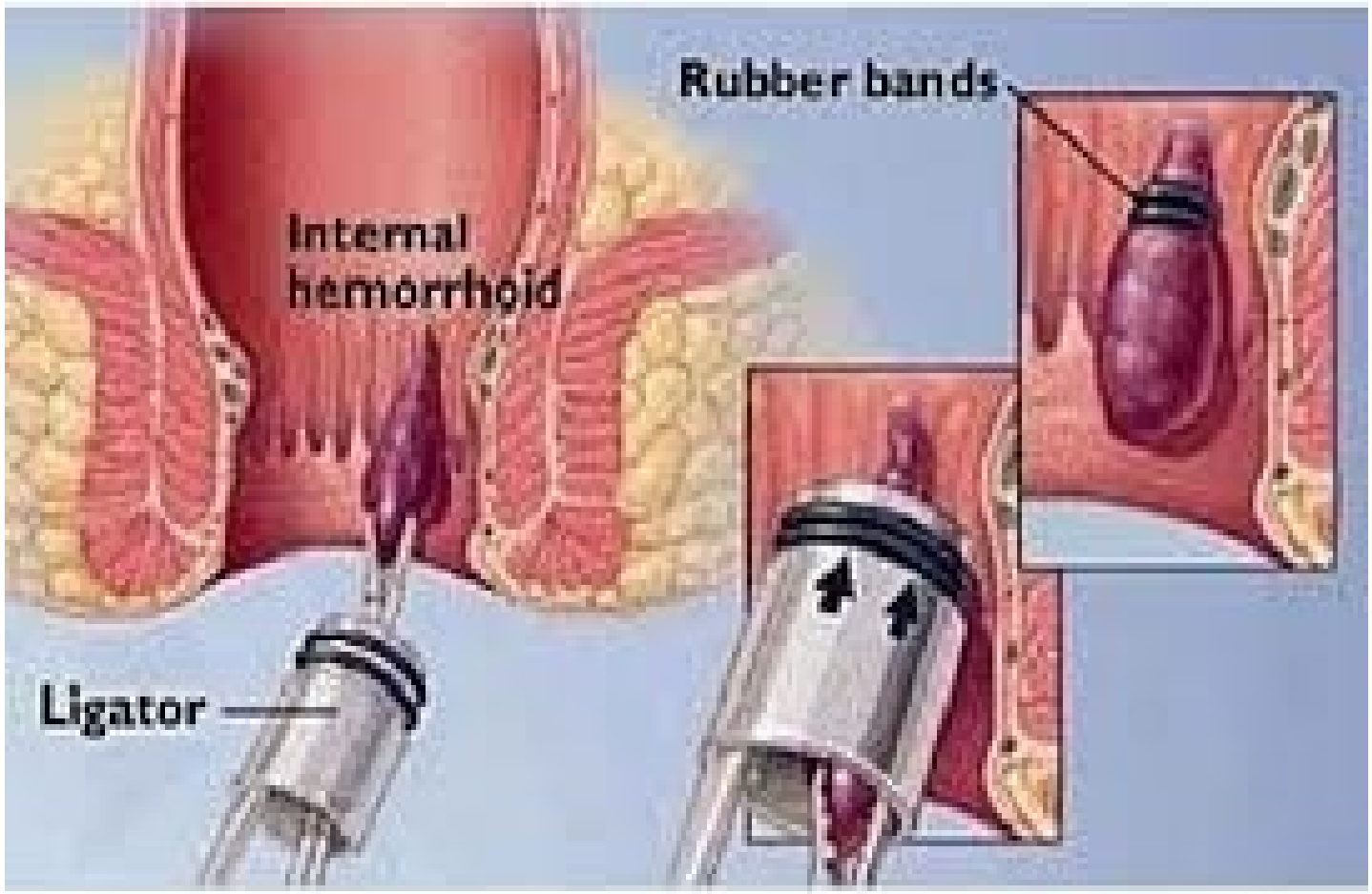
Treatment

- Sitz bath
- Laxatives
- Fibre alternatives
- Sclerosant injection - 1st & 2nd degree, OP basis

  CI – thrombosed /prolapsed pile
- Barrons Banding –

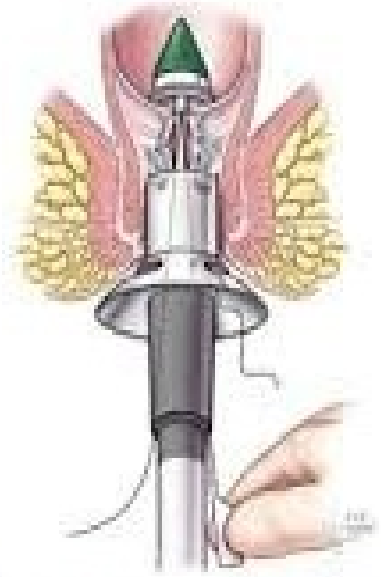
  Causes ischemic necrosis

  Bands placed 2 cm above the dentateline


Rubber bands
Internal hemorrhoid
Ligator

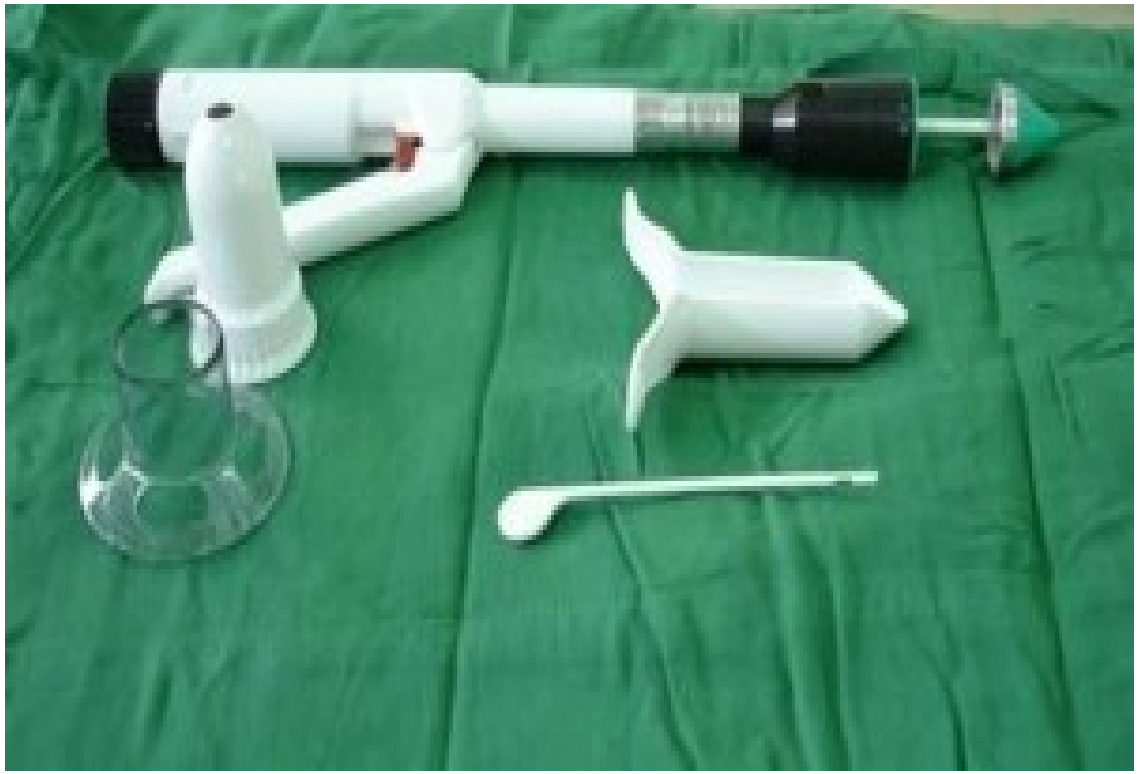

The grazping forcep passed through the loaded drum of Igatox

Stapled Hemorroidectomy



What you need to know

By David Gilbert



- Cryosurgery : nitrous oxide/ liq.nitrogen causes necrosis

  Done with cryoprobe

  Disadvantage – watery discharge
- Infrared Coagulation : infrared waves cause blood coagulation
- Laser treatment
- Stapler Haemorroidectomy: 3rd degree piles

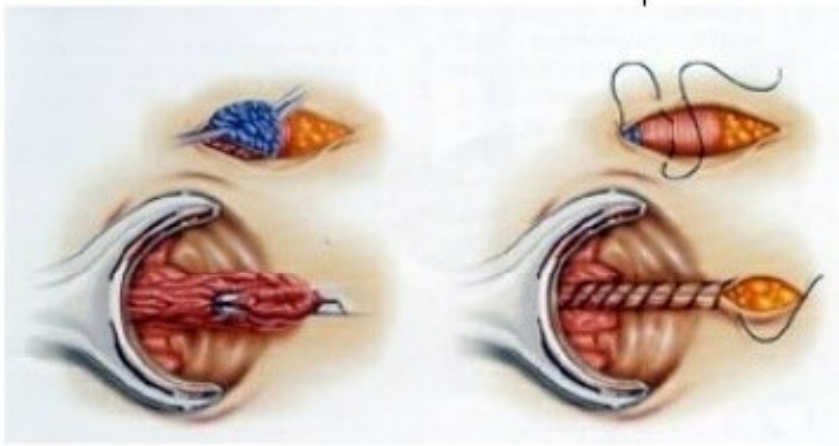
  MIPH-Circular stapler passed per rectally and excision of submucosa and mucosa above dentate line

- Open method
  (Milligan Morgan Haemorroidectomy)

  - Inverted v incision
  - Dissect the pile mass
  - Take care of the internal sphincter
  - Ligate pedicle with absorbable suture
  - Clover leaf appearance
- Fergussons closed haemorrhoidectomy

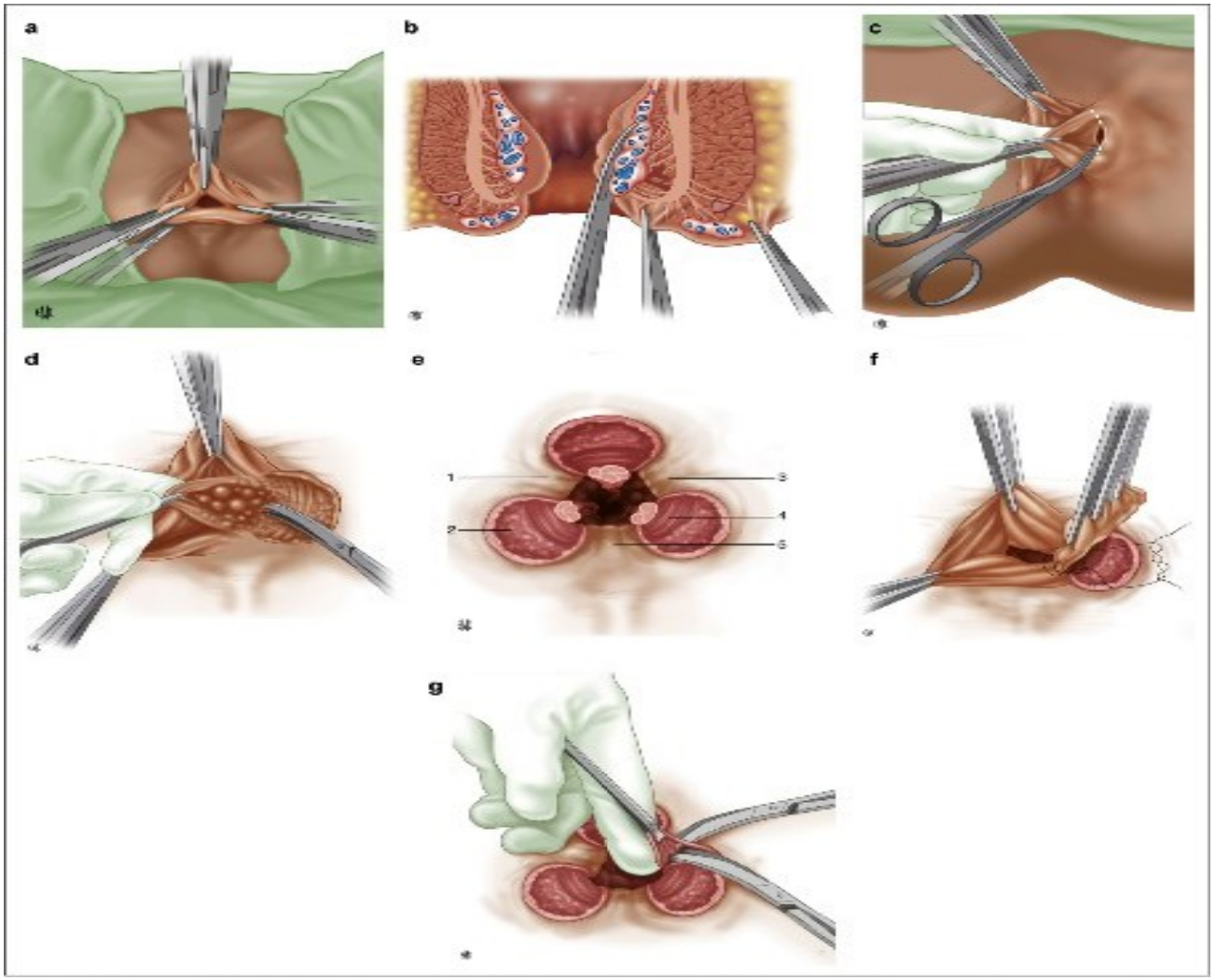
Ferguson's (Closed) Haemorrhoidectomy

- Developed in 1952



- Haemorrhoidal tissue excised.
- Mucosal wound and skin sutured completely with a continuous absorbable suture.

Milligan Morgan Haemorrhoidectomy



Complications of haemorrhoidectomy:

Early:

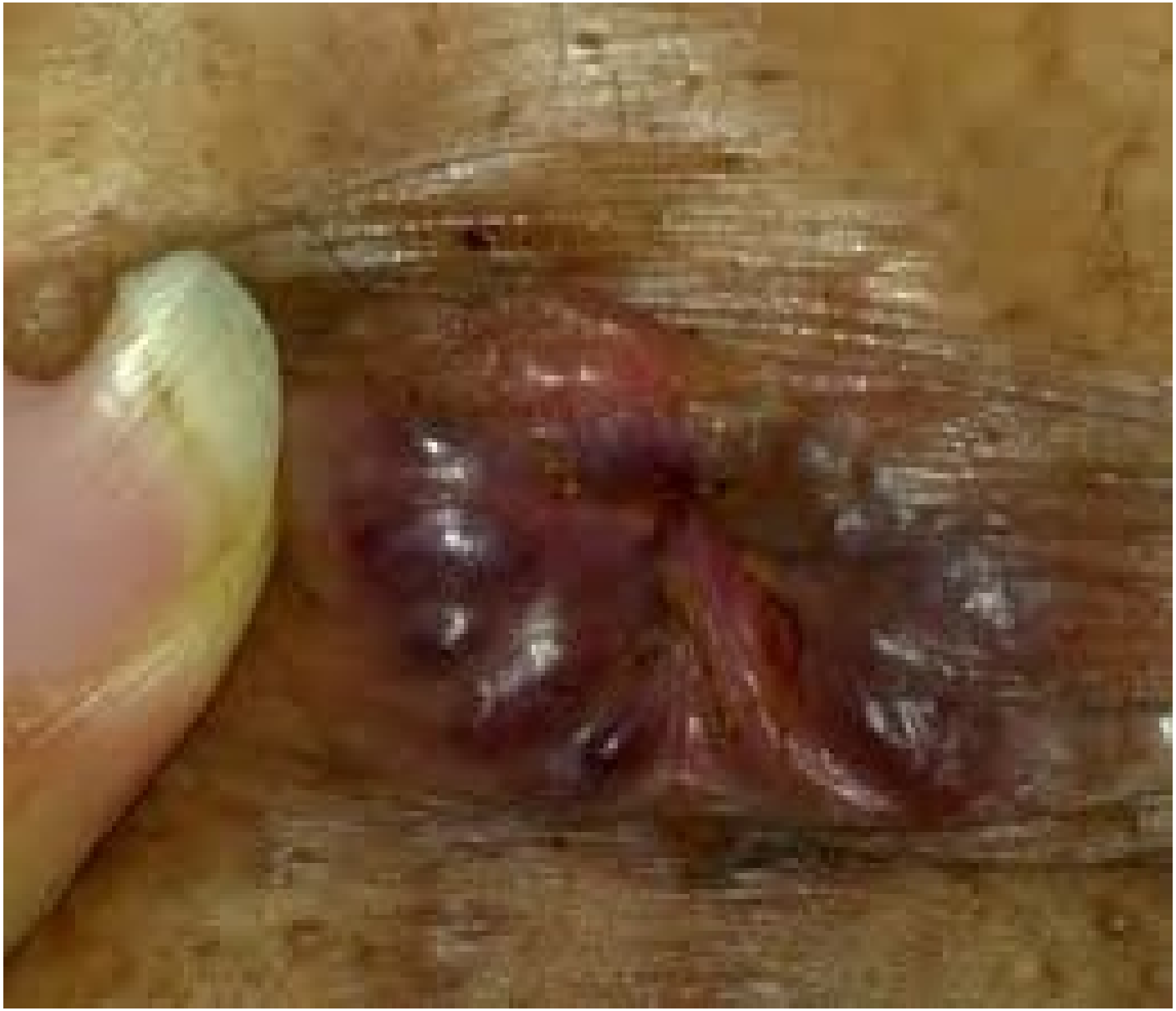
- Pain
- bleeding
- Urinary retention

Delayed:

- Stenosis
- Recurrence
- Incontinence

External Haemorrhoids :

- Thrombosed external pile is also called a ‘perianal hematoma’
- C/F: sudden onset olive shaped swelling , painful,blue in colour,at anal margin
- Rx : Presents within first 48 hrs -> I&D and evacuate clot.
- Untreated -> resolve,suppurate,fibrose-> Cutaneous tag,burst,clot extrude/bleed.
- Milligan termed this “5 day,painful,self-curing lesion”

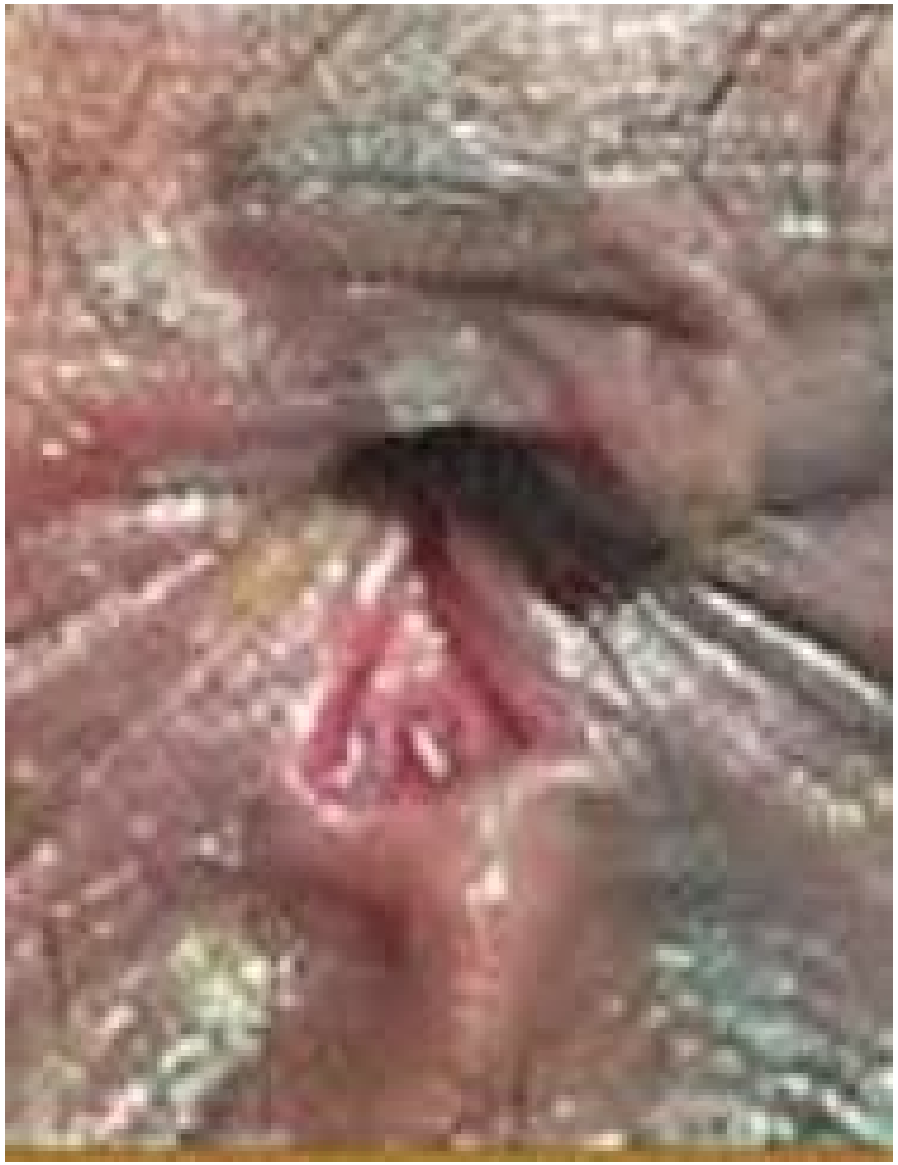


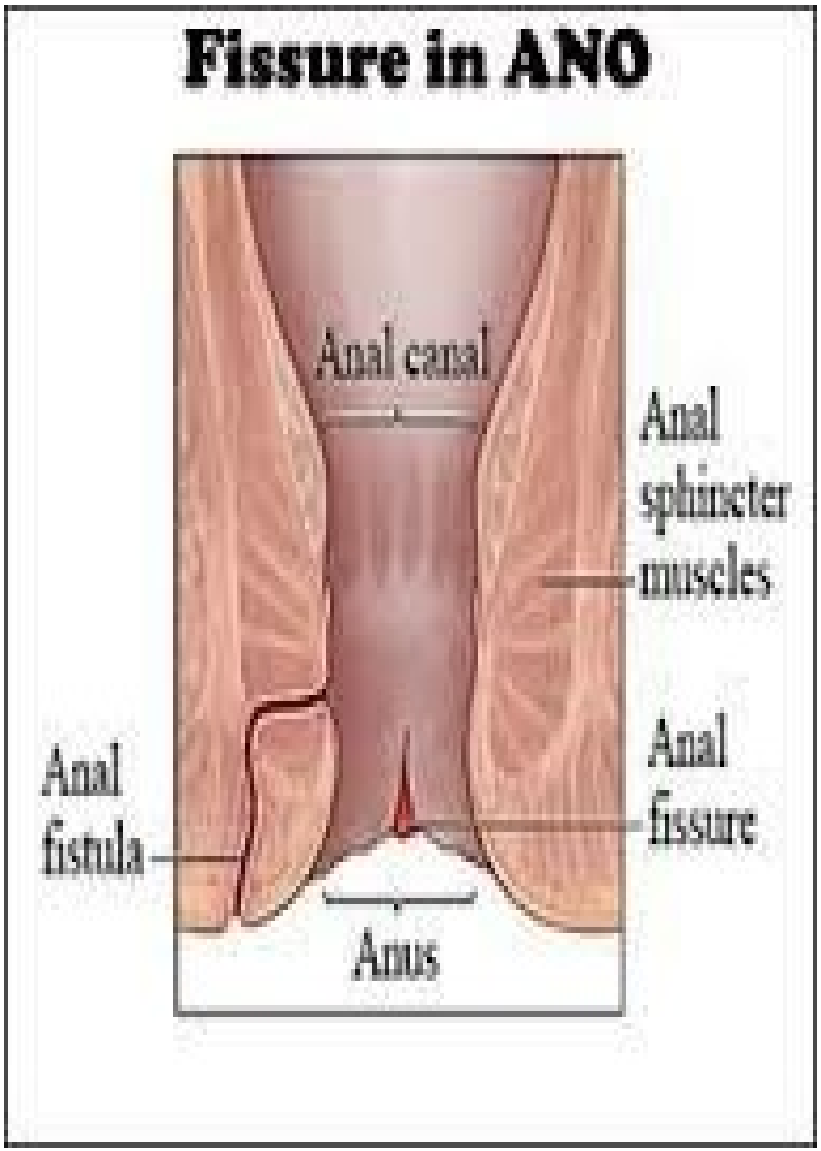
ANAL FISSURE

- Synonym: fissure-in-ano
- Definition: is a longitudinal split in the anoderm of the distal anal canal,which extends from the anal verge proximally, ,but not beyond the dentate line
- Most frequently affected position is posterior midline.Reason not understood.

Cause :

- Strained evacuation of hard stool;
- Repeated diarrhoea
- Following vaginal delivery-anterior anal fissure



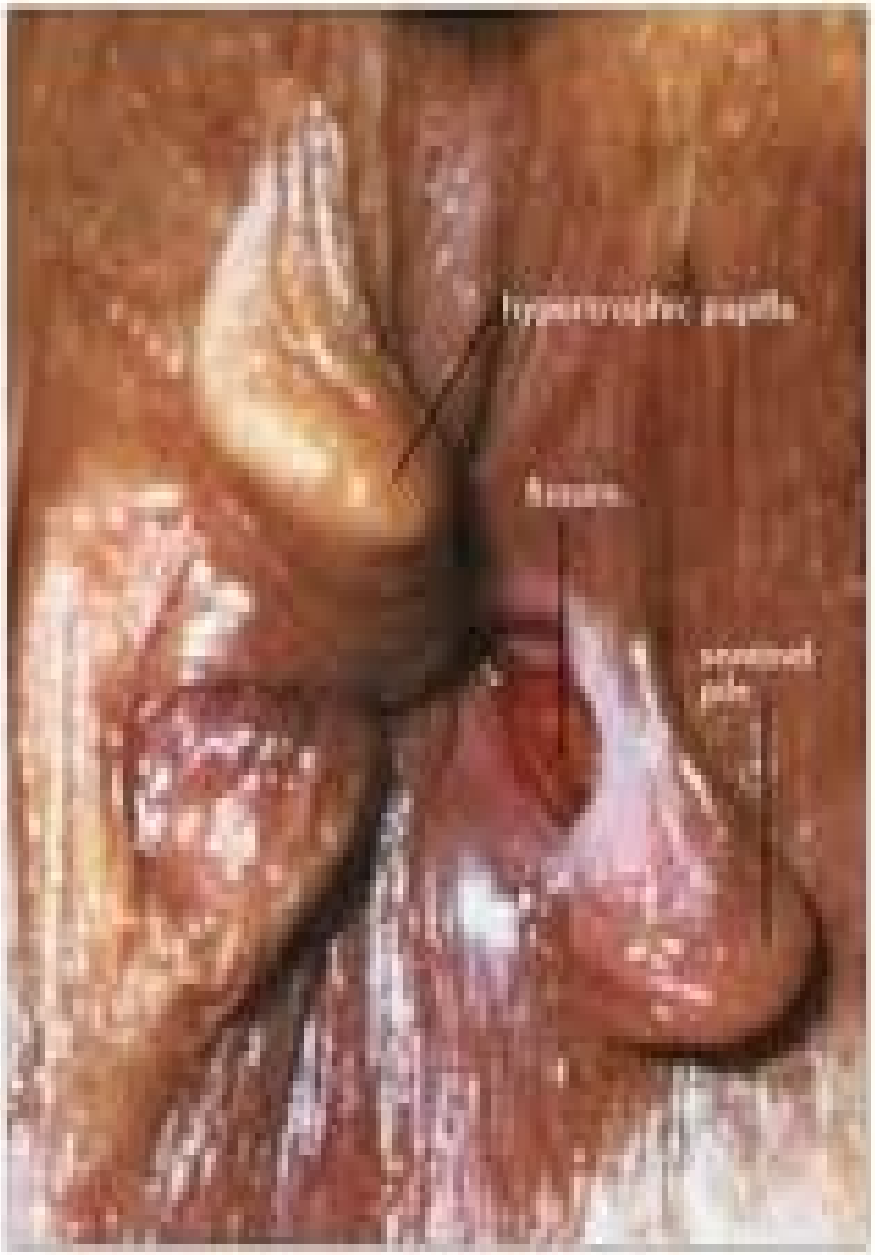

Fissure in ANO
Anal canal
Anal sphincter muscles
Anal fistula
Anal fissure
Anus

- Maybe Acute or chronic(sentinel tag)

  Sites :
- Ulcer in midline of anal canal
- When seen at unusual sites , one should suspect a more sinister cause like chronic inflammatory ds or malignancy.

  Symptoms:
- Excruciating , cutting pain at time of defecation and after
- Bleeding-bright red
- Mucous discharge and pruritus
- Constipation

- Chronic fissure:
  - Lasting more than 8 to 12 weeks
  - Edema and fibrosis
  - Sentinel pile (Skin tag) at distal fissure margin
  - Hypertrophied anal papilla in proximal to fissure.



Treatment:

Conservative management: should be tried as long as possible.

- Stool softeners or laxatives should be given for 2-3 weeks till fissure heals.
- Application of local anaesthetic agents like lignocaine should be advised prior to defecation
- After stools topical application of agents that relax the spasm of internal sphincter like Ca.channel blockers are advised.

- Surgical procedures:

a) Lateral sphincterotomy(Notaras)

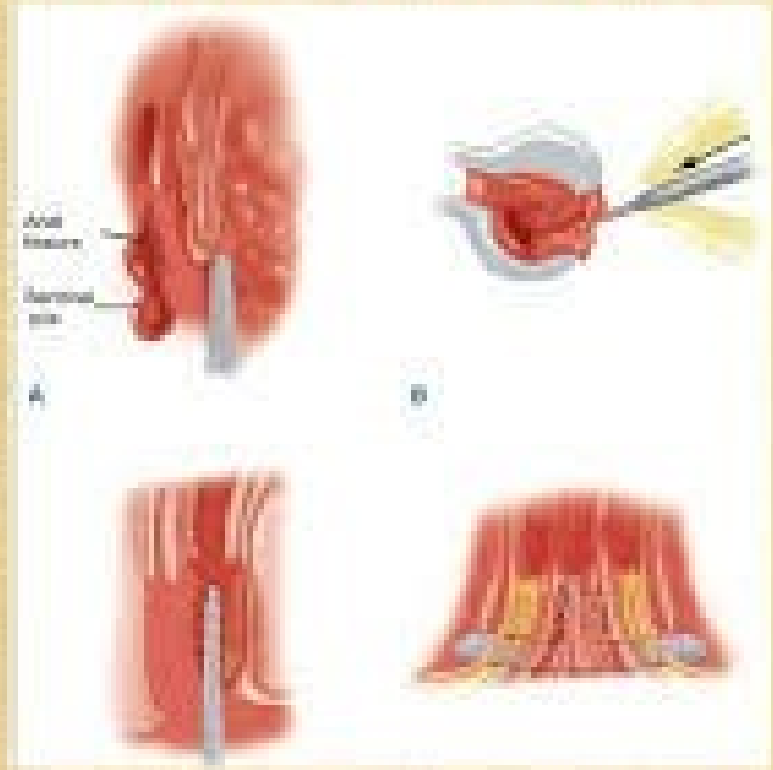
- Internal sphincter is divided at 3 or 9 o'clock
- Open or closed method
- Fibres of the internal sphincter are cut

Complications :

- Bleeding
- Hematoma and Perianal abcess
- Fistula
- Incontinence

b) Anal advancement flap :Gracilis ms flap

Closed lateral internal sphincterotomy for fissure in ano



FISTULA –IN -ANO

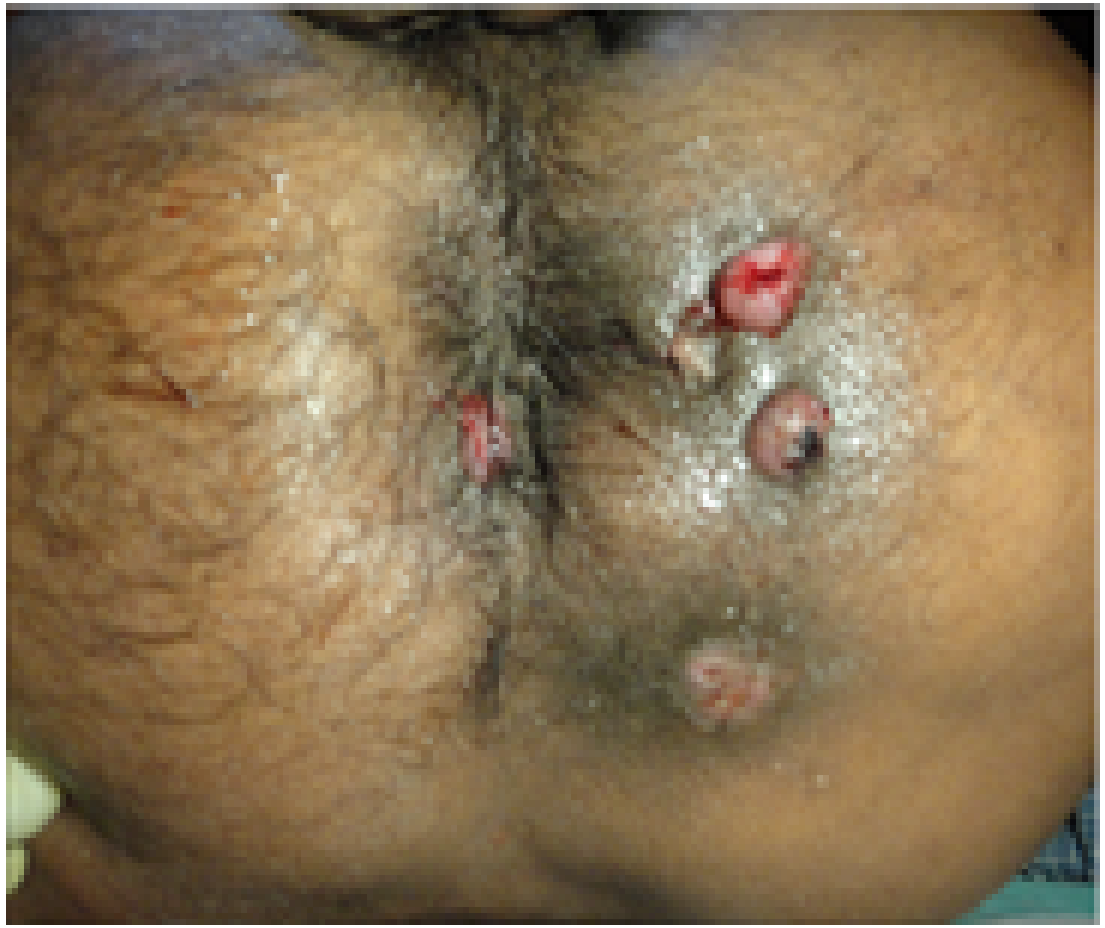
Def : is an abnormal communication , lined by granulation tissue, which runs outward from the ano-rectal lumen to an external opening on the skin of perineum or buttock.

Aetiology :

Maybe seen in association with chronic abdominal conditions like TB, Crohns etc.

Majority are non specific, idiopathic and crypto-glandular in aetiology.

Previous h/o inadequately drained ano-rectal abcess /treated with antibiotics

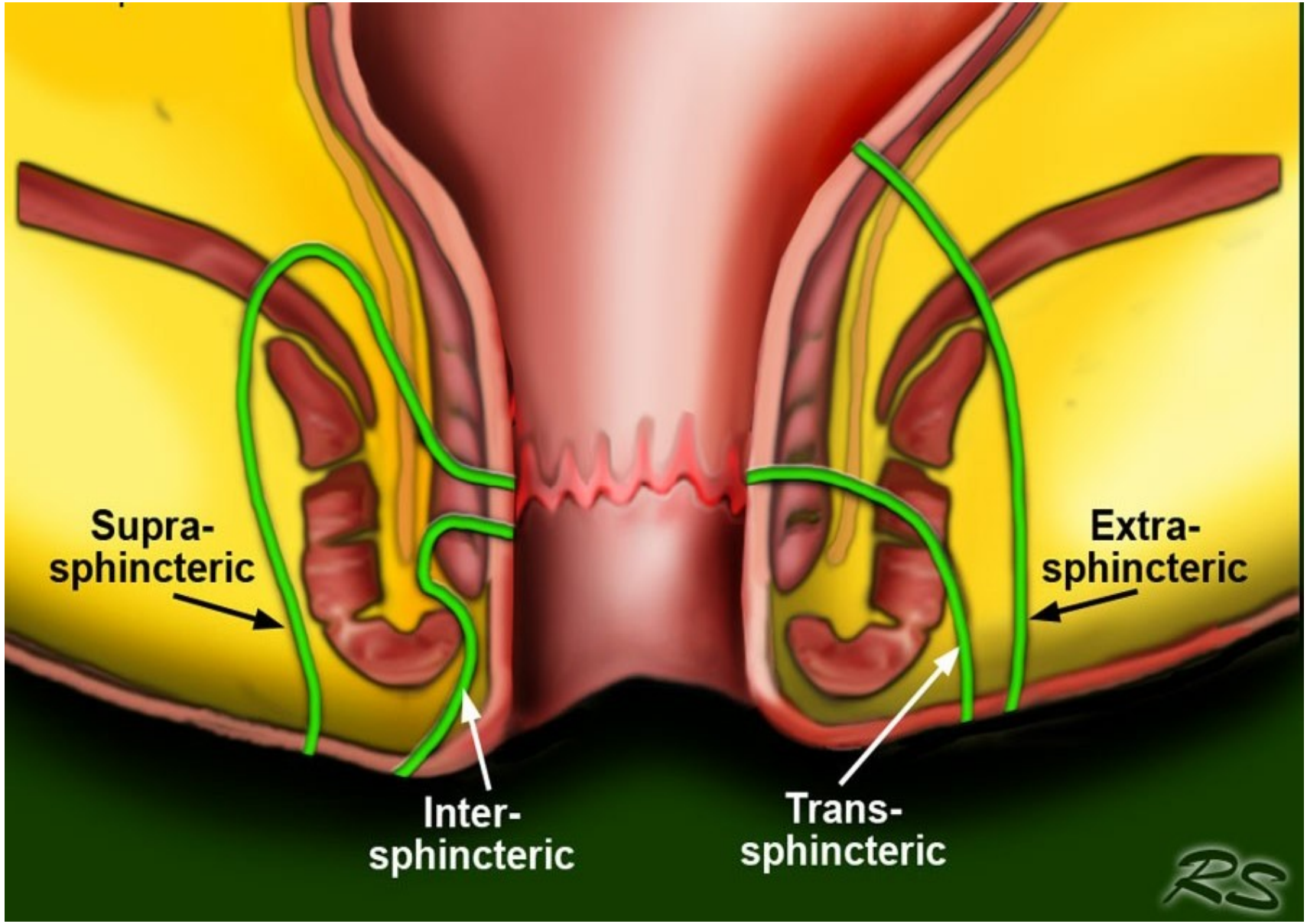


Presentation:

- M > F
- Intermittent purulent discharge
- Pain(once it begins to discharge pain decreases)

Classification :PARKS

Depends on the centrality of the intersphincteric anal gland sepsis ,internal opening being at the dentate line and usually a primary track,whose relation to the external sphincter defines the type of fistula.


Supra-
sphincteric
Extra-
sphincteric
Inter-
sphincteric
Trans-
sphincteric
RS

Intersphincteric:(45%)

- Does not cross the external sphincter.
- Cross the internal sphincter and run in intersphincteric plane to end blindly in the rectum.

Trans-sphincteric(40%)

- Primary track crosses both sphincters.
- May have secondary ramifications
- Often reaches roof of ischio-rectal fossa.
- Circumferential spread of sepsis can occur in all planes.

Supra sphincteric fistulae

- Are very rare
- Difficult to diff. from high transphincteric tracks.
- Maybe iatrogenic
- Management almost the same

Extrasphincteric:

- Run without specific relation to sphincters
- Result from pelvic diseases or trauma

Clinical Assessment :

- Full clinical history
- PR and proctoscopy-
- Site of external opening
- Sphincter tone
- Palpable induration around external opening indicates relatively superficial track

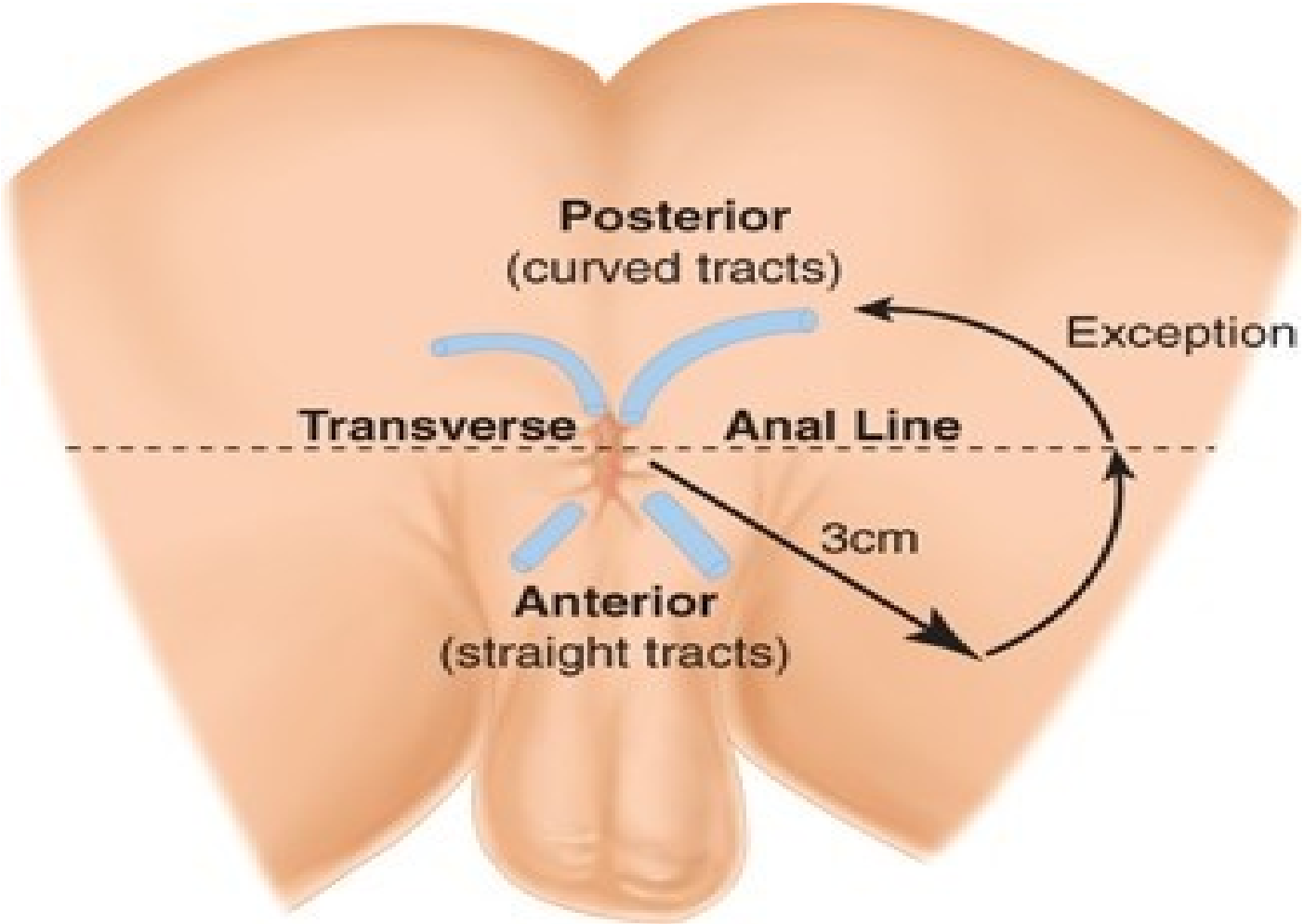
Investigation :

MR Fistulogram is the gold standard

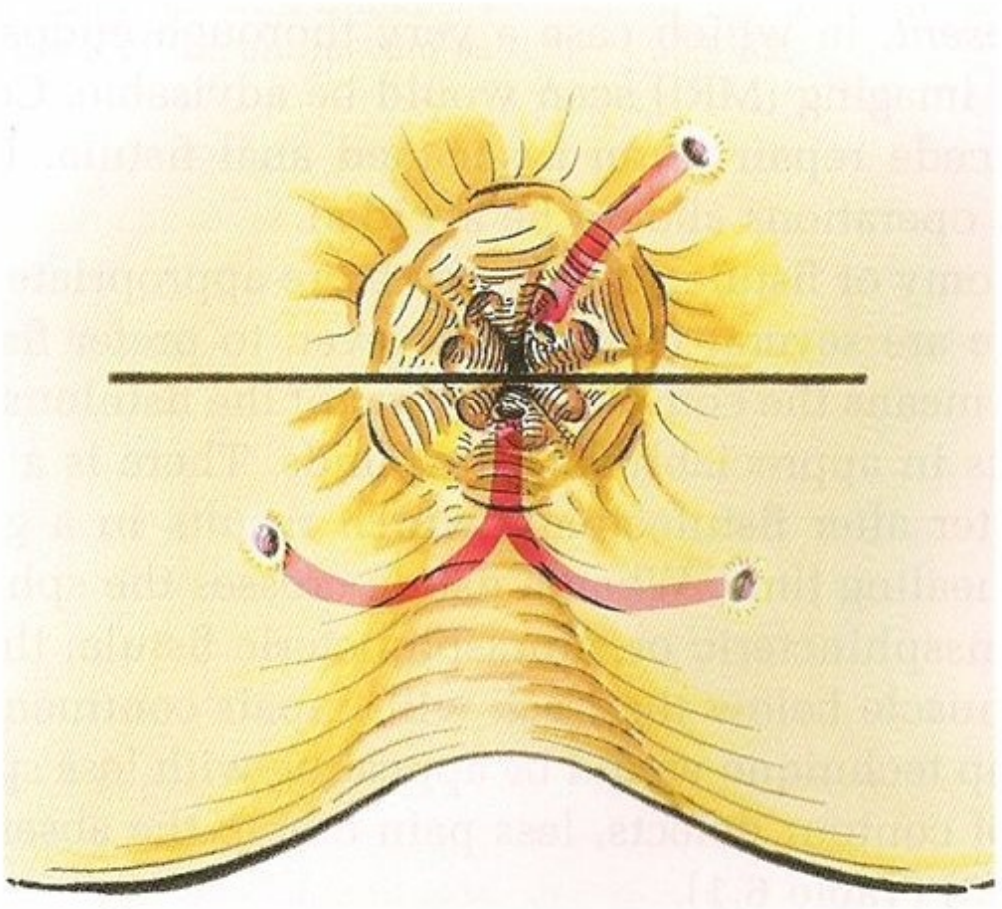
GOODSALLS RULE :

- If the external opening lies behind the imaginary line passing through anus , or anteriorly but beyond 2.5 cm, the internal opening is found in the midline posteriorly in between the two sphincters.,the fistulous track being curved.

- When the external opening is situated in front of the line ,within 2.5 cm ,the internal opening lies on the same radial line as external opening,the track being straight.


Posterior
(curved tracts)
Exception
Transverse
Anal Line
3cm
Anterior
(straight tracts)

Goodsall's Rule



Treatment :

Fistulotomy –laying open of the whole fistulous tract and the secondary ramifications,so that it heals by secondary intention.

The secondary tracks are identified by granulation tissue.

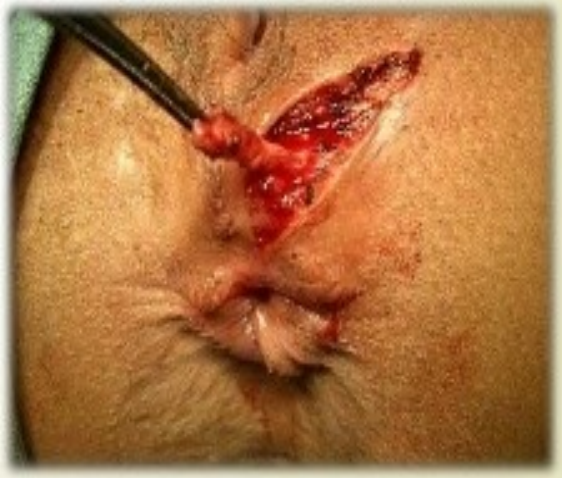
Sphincter that is divided maybe repaired immediately.

Primary track maybe divided and sec.ones dealt with seton

FISTULECTOMY

- All chronic (low) and also for posterior horse-shoe shaped fistulas.
- Excision of entire fibrous tissue and tract and wound kept open.
- Sphincter repair +/- advancement flap.
- High anal fistulas

  +/-colostomy.



Fistulectomy:

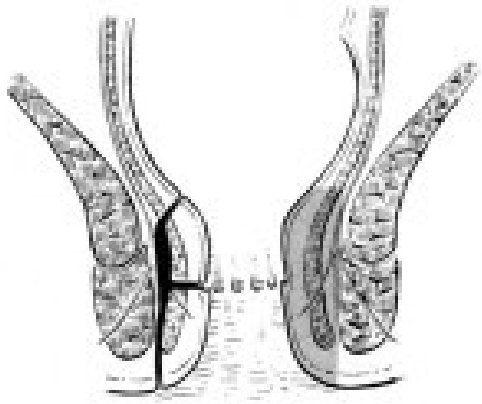
- Coring out of the fistula using diathermy
- Better definition of anatomy
- Better healing

Setons :Latin- meaning “bristle”

- Loose setons– no intention of cutting through
  - non absorbable,non degenerative
- Tight cutting setons: to cut throughms.

Fistulotomy

- **Lay-opening** of the fistula track from external opening to internal opening
- Inter-sphincteric fistula
- Recurrence rate 0-21%
- Disturbance in continence: 0 to 82%
- Extent of external sphincter division: <30%



J.G.Williams et al. Colorectal Disease 2007

Advancement flaps are used

Preserves both anatomy and function

Glues :

Fibrin glue is used

Granulation tissue is removed

Track filled with glue

Promising results

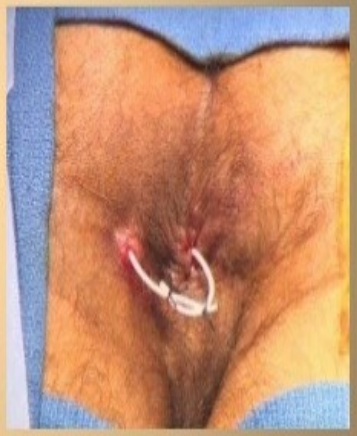
Advantage is preservation of sphincter

•Fibrin glue:

- Fibrin glue is currently the only non-surgical option for treating fistulae.
- The fibrin glue is injected into the fistula to seal the tract. The glue is injected through the opening of the fistula, and the opening is then stitched closed.
-long-term results for this treatment method are poor.

Surgical Options – Cutting Seton

- Lay open external tract
- Draining seton replaced with cutting seton
- 1/0 Prolene suture
- Tied tight around sphincter complex
- Simultaneous slow cutting and repair of sphincter
- May require re-tightening



Use of loose setons:

- Achieve effective drainage without the misery of incontinence
- Allows fibrosis so was used as an age old method of treating fistulas to eradicate sec. tracks
- As part of staged fistulotomies
- As a therapeutic method to preserve external sphincter.

Seton left in place for 3 months and removed.

Area is kept clean by daily irrigation

LIFT –Ligation of intersphincteric fistula

- Done by ligation of fistulous tract in the intersphincteric space with currettage of remaining tract.
- Healing rate of upto 83% .

VAAFT- Video assisted anal fistula treatment:

- Diagnosis using 18 cm rigid fistuloscope with 8 degree angled eyepiece passed through external opening
- Glycine mannitol sol. used to open track
- Cauterisation of the track is done
- Using endobrush currettings are removed

- Stapler is used to seal off the internal opening
- Success rate of more than 90 %
- Advantage is sphincter preservation.
- Post op pain is minimum

Autologous adipose derived stem cells derived from liposuction used

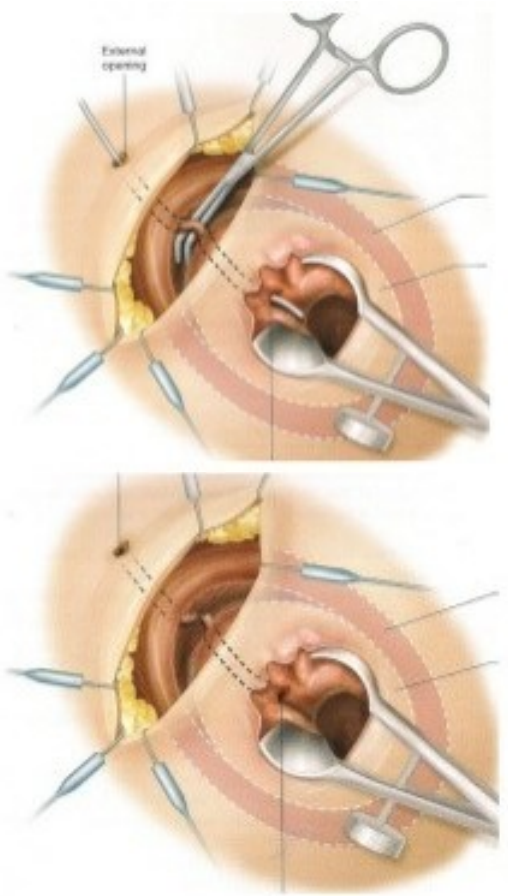
Used in combination with fibrin glue

LIFT Procedure

Ligation of **I**ntersphincteric **F**istula **T**ract

- Transsphincteric fistula
- Draining seton – 6 weeks

- Tract prepared with fistula brush
  - Debrides
  - De-epithelializes



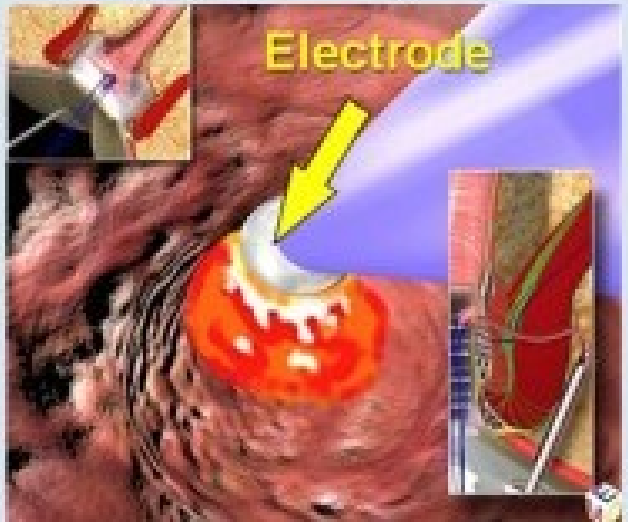
BioLIFT Procedure

- A modification of LIFT Procedure
- Placement of biologic mesh in the intersphincteric space
  - Barrier to re-fistulization

C. Neal Ellis et al. Meeting of The American Society of Colon and Rectal Surgeons 2012

VAAFT: Meinero technique

- Ablation of the fistula tract with unipolar electrode
- Closure of the internal opening with stapler
- Injection of cyanoacrylate into the fistula tract



Meniero P. Tech Coloproctol 2011

THANK YOU