

Hemorrhoids

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Hemorrhoids

- Derived from anal cushions
- Anal cushions complement anal sphincter by providing control over continence of liquid & gases
- Anal cushions are normal structures found in anal canal formed by
 - 1. mucosa
 - 2. submucosal fibroelastic CT
 - 3. smooth muscles in arteriovenous channel system

Terminology

- **A. Internal Hemorrhoids**

Are symptomatic anal cushions

- Typically at 3, 7 & 11 O'clock position
- May be in between these so called at secondary position



- **B. External hemorrhoids** relate to venous channels of inferior hemorrhoid plexus at anal verge

- Not true hemorrhoids

- **C. Interno-external** which are extension of Internal

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- Involve hemorrhoidal plexus as well

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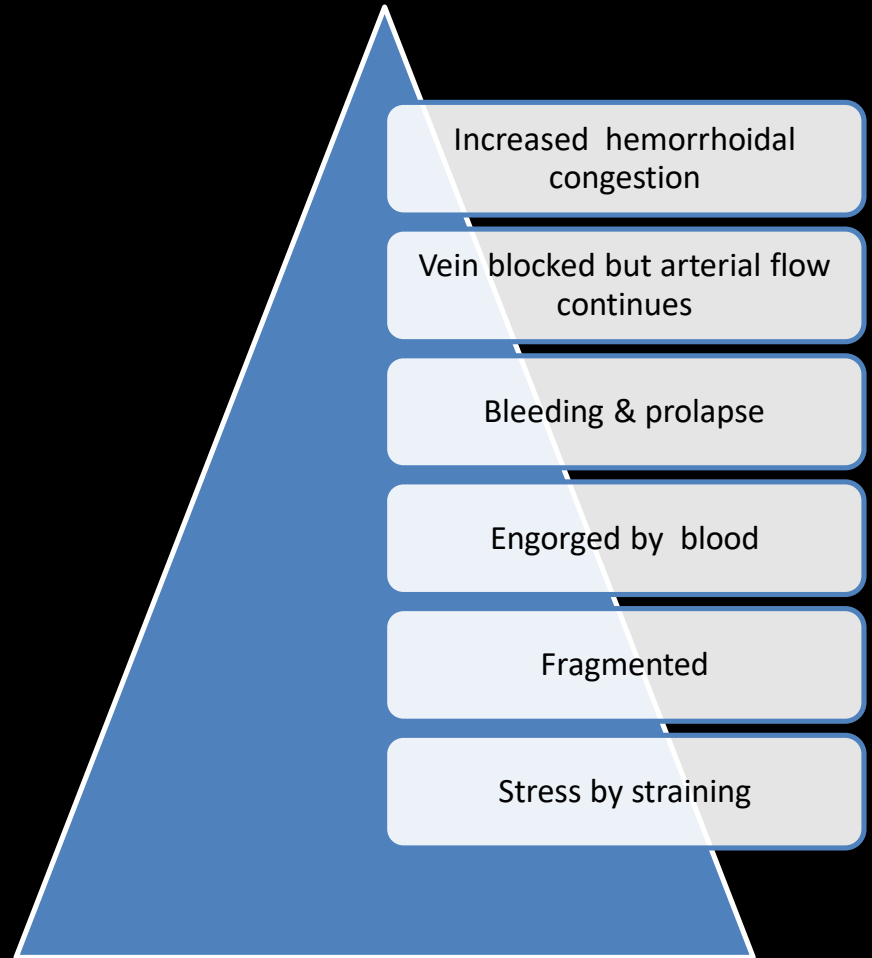
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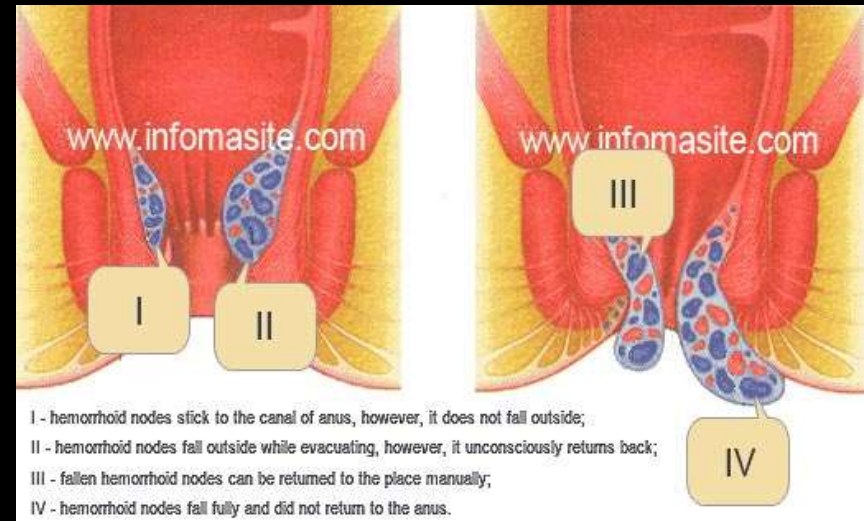
Pathogenesis & Etiology

- Constipation in squatting position
- Diarrhea & tenesmus
- Hereditary
- Erect posture
- High intra-abdominal pressure
- Pregnancy



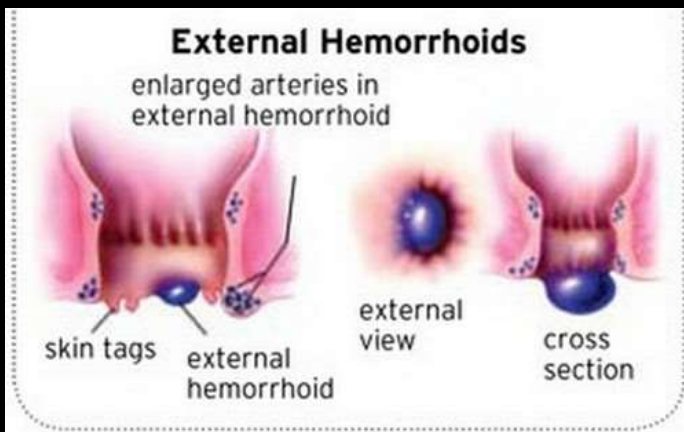
Anatomy & Nomenclature

- **Internal hemorrhoids** are symptomatic arteriovenous channel above the dentate line
- Divided into 4 degrees
- 1st Degree= Bleeding & no prolapse
- 2nd Degree= Prolapse but spontaneous reduction
- 3rd Degree= Prolapse needing manual reduction
- 4th Degree= Irreducible prolapse



Anatomy & Nomenclature

- **External hemorrhoids** are dilated vascular plexus below dentate line
- Commonly termed Perianal hematoma
- Happens following sudden straining, coughing or lifting heavy weight
- Sudden onset of oval shaped painful blue subcutaneous swelling at anal margin
- Bleeding not prominent feature
- If Pts in 48/24 evacuate hematoma
- If untreated can become skin tags



Complications of Hemorrhoids

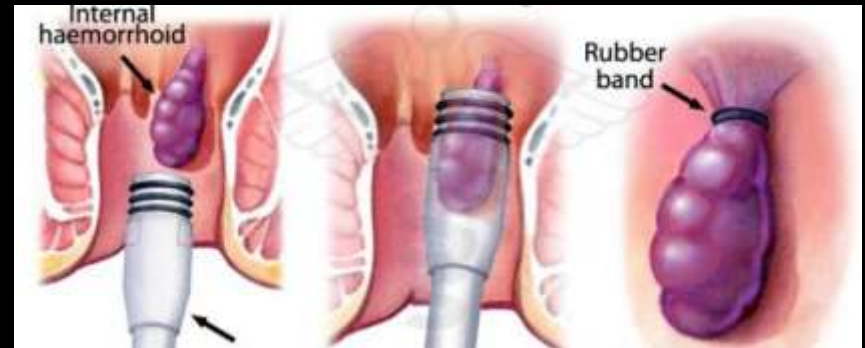
- Strangulation & Thrombosis
- Ulceration
- Gangrene
- Portal Pyemia
- Fibrosis

Management

- May be a feature of Rectal cancer & IBD
- Blood or mucous mixed in stool
- Change in bowel habits
- Abdominal pain
- F/H of colorectal cancer
- Anal cushions are normal structures & contribute to normal function
- Therapeutic option depends on symptoms & prolapse

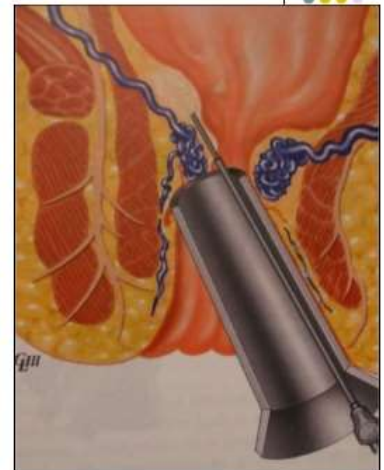
Non Prolapsing or Mildly Prolapsing Hemorrhoids

- Non operative methods first
- Correct constipation & straining
- Laxative may be used
- Rubber band ligation
- Injection sclerotherapy
- Dafalon 500



Sclerotherapy

- Quick
- painless
- Follow up after 6 weeks
- 2-3 further injections may be required
- Free from major complications



Injected in submucosa around pedicle

Rubber Band Ligation

- Rubber bands applied at apex of hemorrhoidal tissue
- Up to three bands can applied at time
- Effective in 60-80% of cases
- 2-5% risk of secondary bleeding



- Treatment of choice for 2nd degree
- Surgery reserved for 3rd degree or failed band ligation

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Injection Sclerotherapy

- 5% phenol in almond oil
- Injected in submucosa around pedicle
- Effective in 70%
- Correct plane shown by elevation of mucosa without blanching during injection
- Peri rectal fibrosis & infection
- Ureteral irritation
- Injection in prostate very painful
- Erection
- Strong desire to void
- Hematuria & haemospermia
- Severe sepsis

Other Methods

- Daflon 500

Noradrenaline mediated venous contraction

Reduction in blood extravasation from capillaries

Inhibition of PGE2 inflammatory response

- Photocoagulation

- Cryotherapy

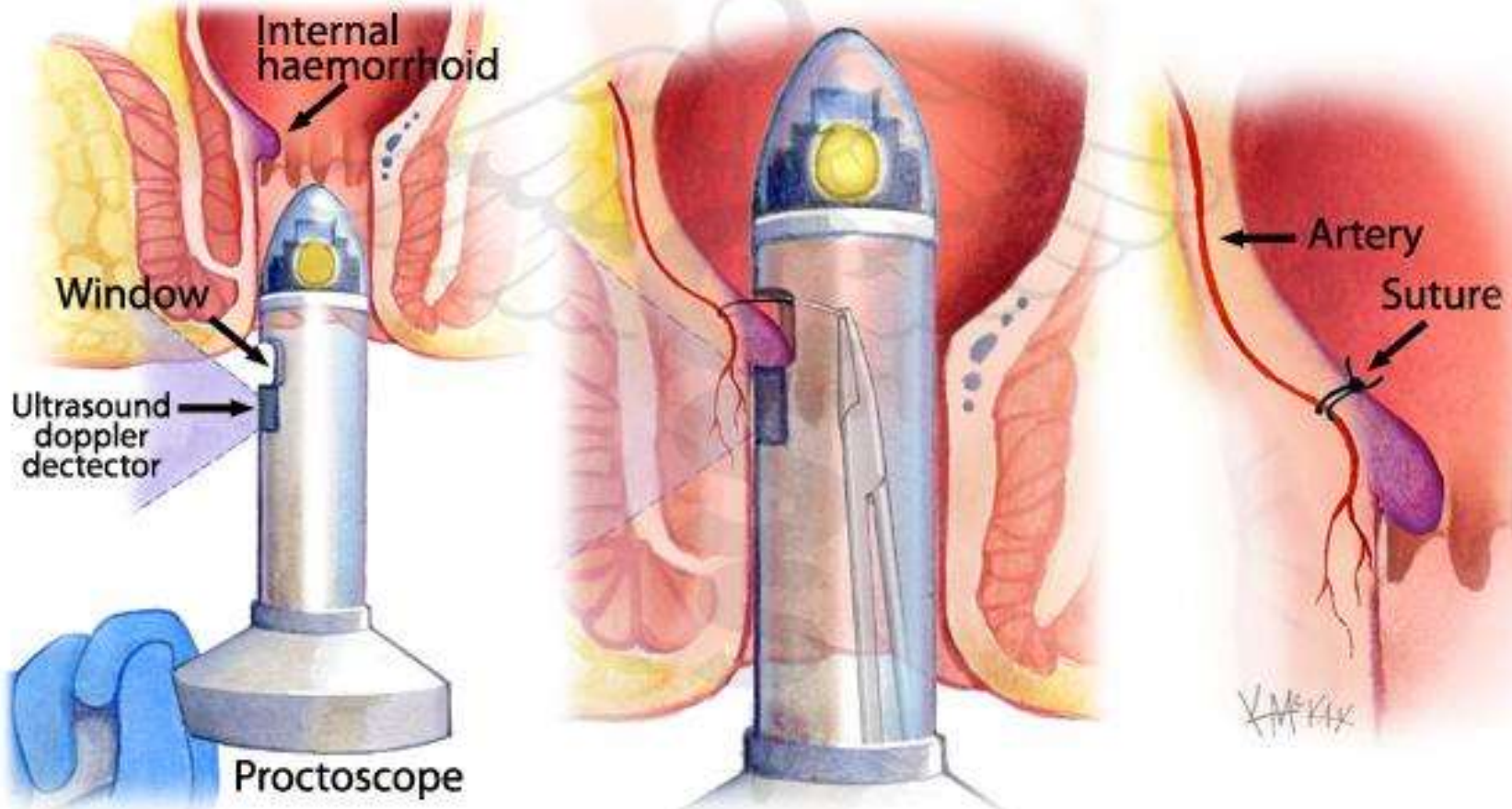
- Self treatment may delay serious diagnosis like cancer

Hemorrhoidal artery ligation-H.A.L procedure

- ❑ New technique
- ❑ Doppler guided ligation of hemorrhoidal artery
- ❑ Painless and quick
- ❑ Outpatient treatment
- ❑ Good results- approx 90%



Doppler-guided Haemorrhoid Artery Ligation

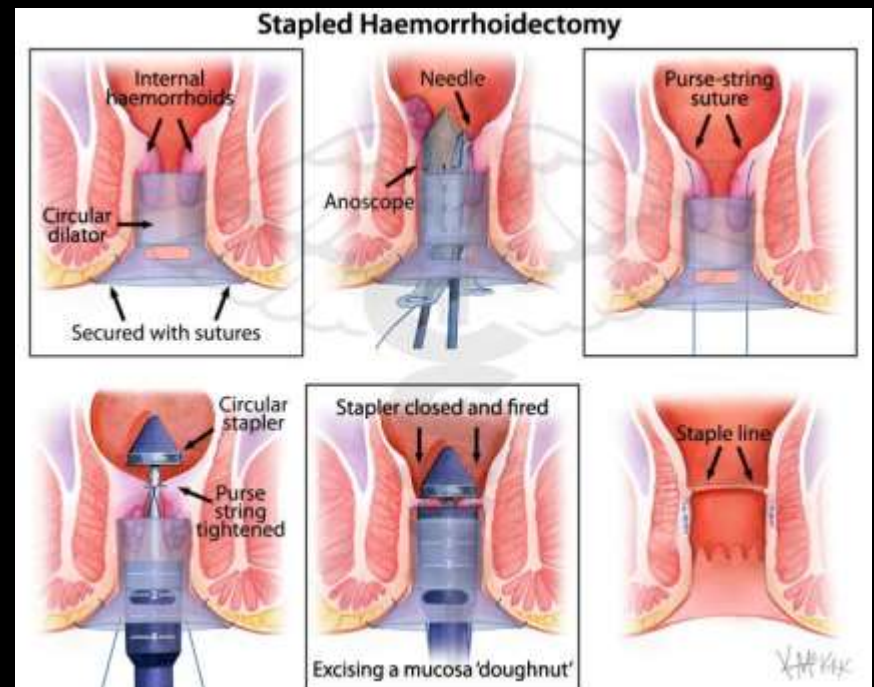


Irreducible Prolapsed Piles

- Needs excisional haemorrhoidectomy

- Stapled haemorrhoidectomy

- Severe pain



Complications of Hemorrhoidectomy

The following is a partial list of the potential problems of surgical hemorrhoidectomy:

- Pain
- Urinary retention
- Urinary tract infection
- Constipation
- Fecal impaction
- Hemorrhage
- Infection
- Anal tags
- Mucosal prolapse
- Mucosal ectropion
- Rectal stricture
- Anal fissure
- Pseudopolyps
- Epidermal cysts
- Anal fistula
- Pruritus ani
- Fecal incontinence
- Recurrent hemorrhoids