Surgery

Haemorrhoids

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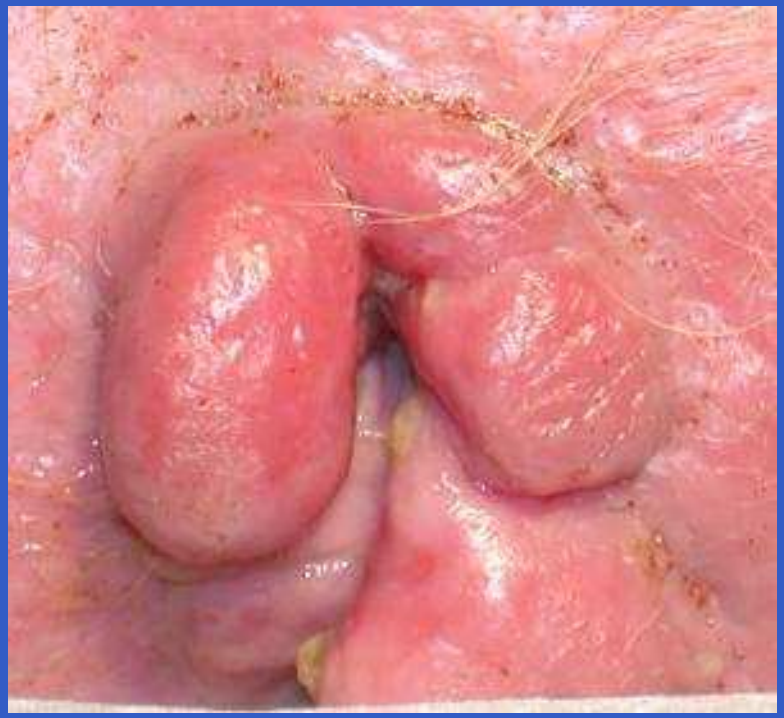
Haemorrhoids



- Definition
- History
- Anatomy
- Physiology
- Patho-physiology
- Clinical features
- Treatment

Definition

- To the layman “Anything around the tailend”

  circimferential longitudinal muscle
- Piles - Pila Latin for ball
- Haemorrhoid - Greek Haema for blood, Rhoos to flow

Polypoid protrusion of mucosa and or skin through the ano-rectal ring

50% People at 50 years of age

Internal and External Haemorrhoids

Internal

- From the cushions
- Covered in mucosa
- Bleed
- Inject, Band, Remove

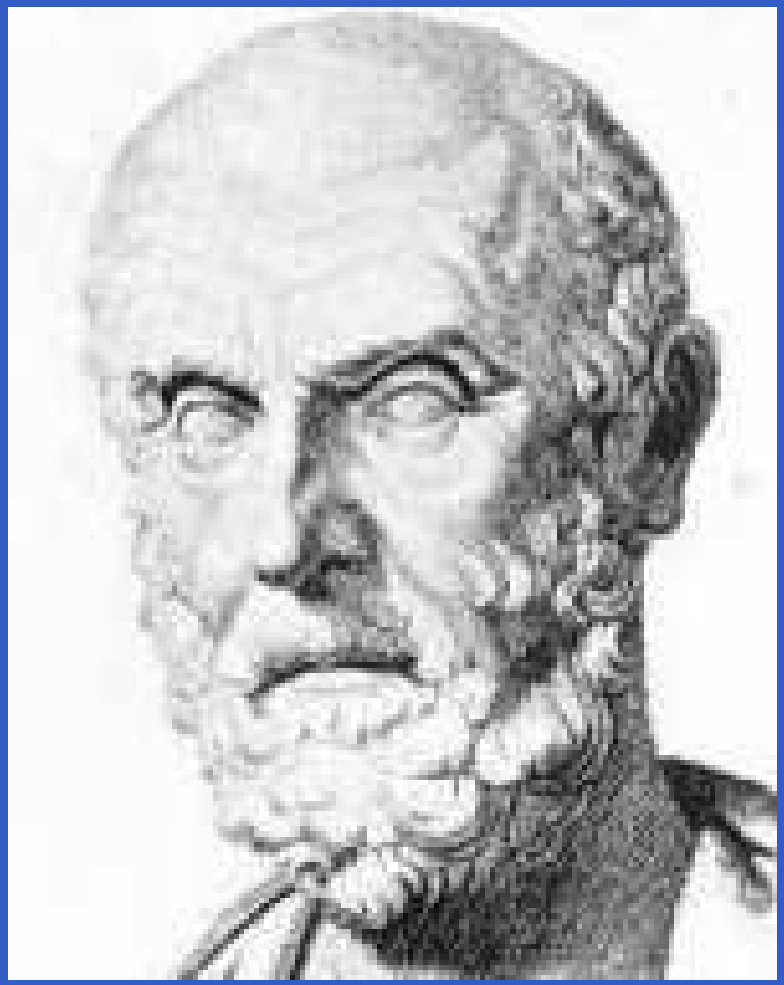
External

- From below the dentate line
- Covered in skin
- Remove

History

- 2250 BC, treatment of Haemorrhoids in Babylon
- 400 BC, Hippocrates (460-337 BC) book ‘On Haemorrhoids’
- 150, Galen (131-201), bleeding good for patient
- 1360, John of Arderne (1306-1390) used term piles
- 1869, injection treatment by Morgan (Dublin)
- 1937, Open Haemmorhoidectomy, Milligan (UK) Morgan
- 1952, Ferguson in the States describes closed hemorrhoidectomy
- 1963, Rubber banding introduced by Barron (Detroit)
- 1998, Longo introduces the stapling procedure

Hippocrates



You will recognize the hemorrhoids without difficulty, for they project on the inside of the gut like dark-colored grapes, and when the anus is forced out they spurt blood.

Hippocrates

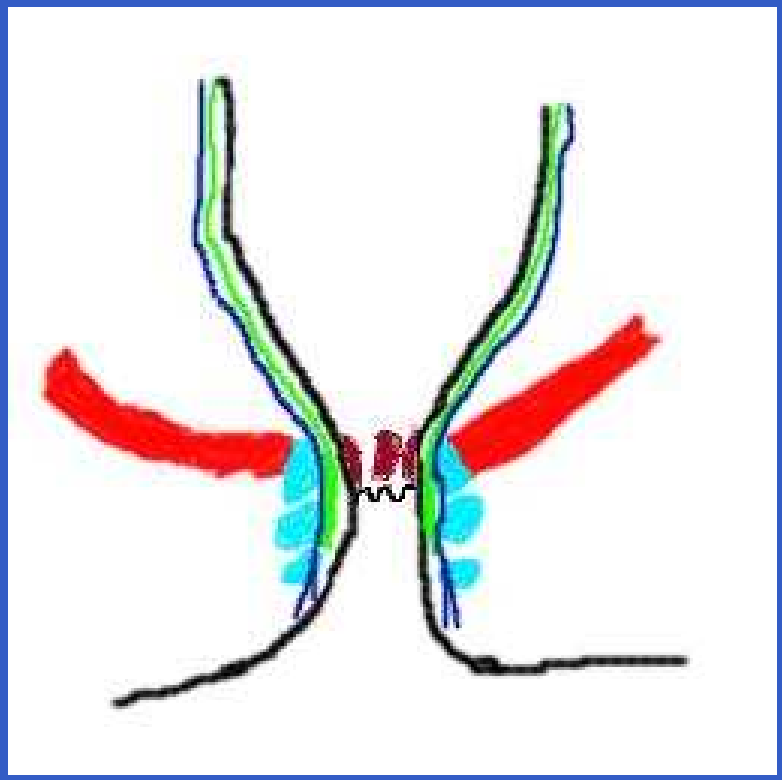
Having on the preceding day fi rst purged the man with medicine, on the day of the operation apply the cautery. Having laid him on his back, and placed a pillow below the breech, force out the anus as much as possible with the fi ngers, and make the irons red-hot, and burn the pile until it be dried up, and so as that no part may be left behind. And burn so as to leave none of the hemorrhoids unburnt, for you should burn them all up.

When the cautery is applied the patient's head and hands should be held so that he may not stir, but he himself should cry out, for this will make the rectum project the more.

Anatomy of the anal canal

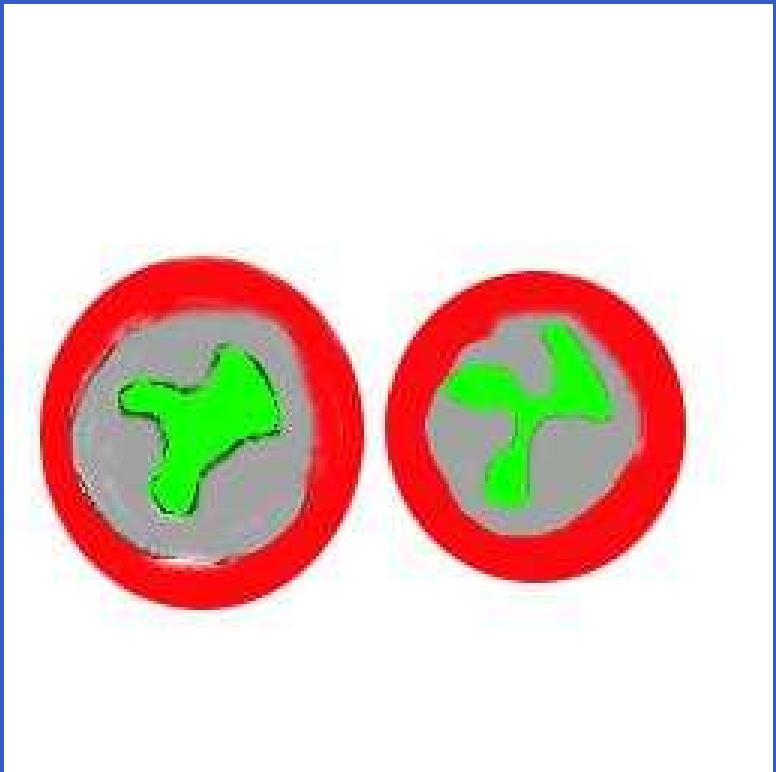
- Starts; at the end of the rectum
- Haemmoroidal Cushions; Terminal branches of the rectal arteries
- Sphincters; Two internal (circular smooth muscle, involuntary), external (skeletal muscle, three parts, voluntary)
- Dentate line; where the columnar lining changes to squamous, the squamous lining is very, very sensitive (don’t inject haemmoroids here)

Sphincters



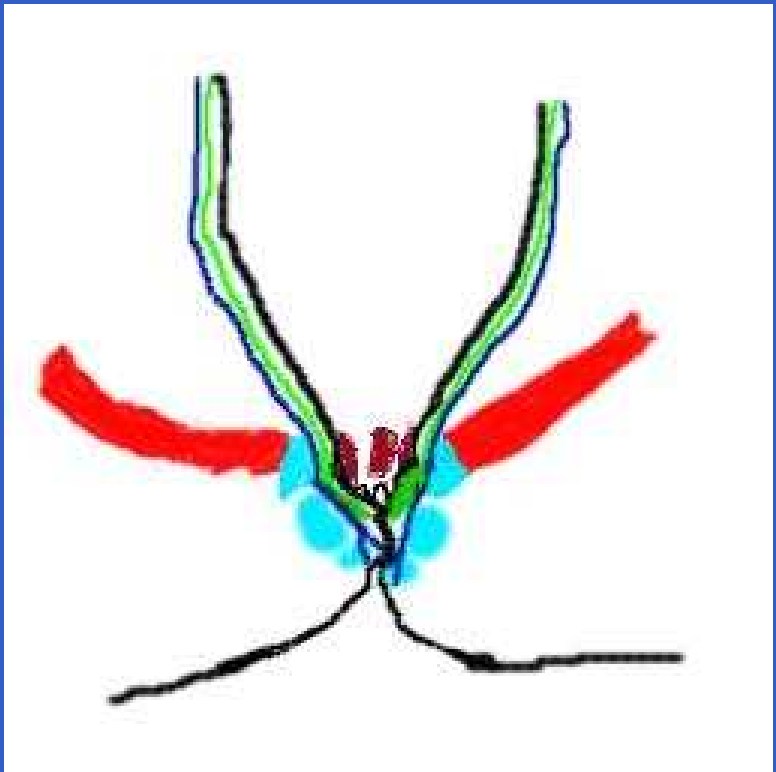
- Levator
- Ischio-Rectal Fossa
- External Sphincter
- Internal Sphincter

Cushions



- Continence
- Internal haemorrhoids arise from these

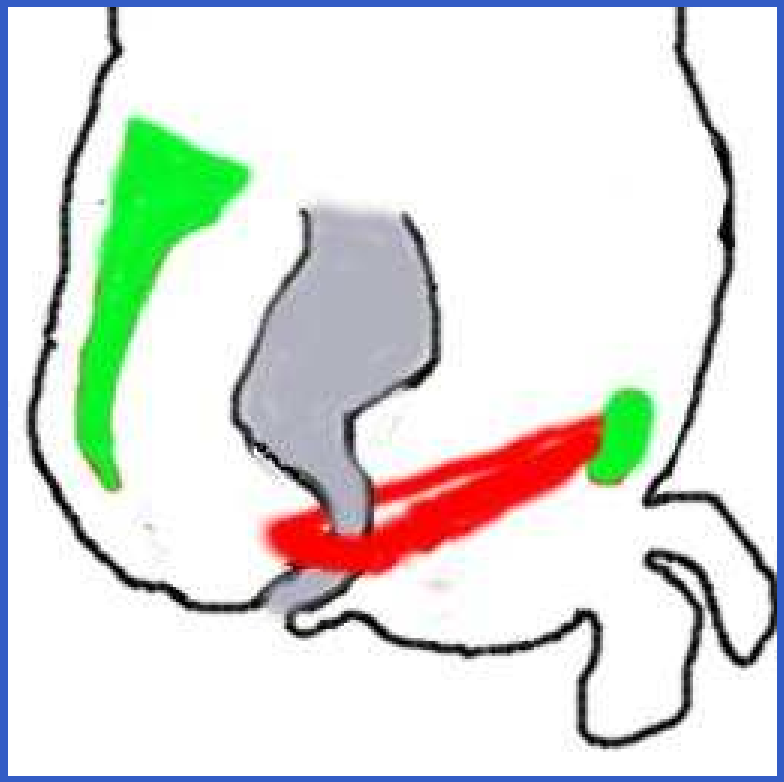
Physiology - Sampling



Recto-anal inhibitory reflex

- Internal relaxes
- External squeezes
- Differentiate flatus from faeces

Physiology - Continence



- Nature of stool
- Rate of delivery
- Rectal compliance
- Rectal volume
- Sampling
- Sphincters
- Angle

Pathophysiology - Histology

Haemorrhoids consist of;

- Thick submucosa often oedematous
- Blood vessels often thrombosed
- Smooth muscle
- Connective tissue including Elastin

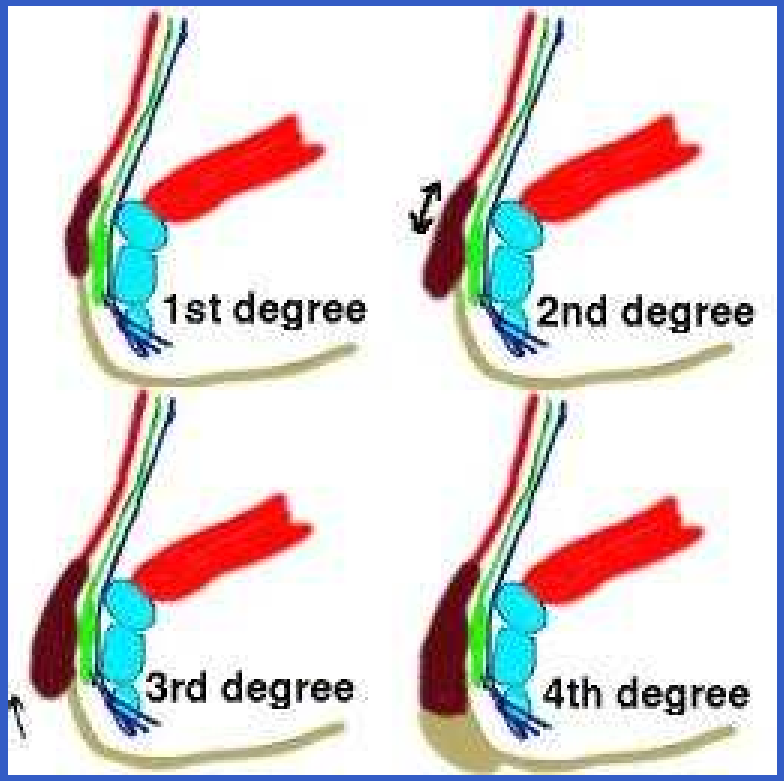
Pathophysiology - Pathogenesis

Unknown;

- Poor return of venous blood; straining, portal venous hypertension
- Sphincter dysfunction - trauma to cushions - swelling
- Damaged connective tissues - prolapse

No evidence that rectal cancer causes haemorrhoids - but

Haemorrhoids - The four degrees



1. Never prolapses, may bleed
2. Prolapses and re-duces, bleeds
3. Prolapses (has to be put back), minor soiling
4. Always prolapsed

Haemorrhoids - Presentation

- Discomfort Pain; not usual to cause severely painful defecation
- Itch - Pruritis Ani
- Prolapse
- Incontinence, minor soiling
- Bleeding; typically bright red following defection, comes and goes

Haemorrhoids - Complications

- Acute prolapse and thrombosis
- Ulceration

Haemorrhoids - Examination

- Position
- Tags and external haemorrhoids
- Fissures (pain)
- Proctoscopy to check cushions

Examination of residual bowel?

Colonoscopy and / or Barium enema?

- Always
- Bleeding is not the typical bright red post defecation
- Associated change in bowel habit
- Age over 50
- Bleeding has not ceased after treatment of haemorrhoids

Differential Diagnosis

- Mass
- Pain
- Bleeding

Mass

- Rectal prolapse
- Rectal tumour
- Perianal haematoma
- Warts
- Fibro-epitheleal polyp

Differential Diagnosis - Pain and Bleeding

Pain

- Acute anal fissure
- Perianal haematoma
- Perianal dermatitis
- Proctalgia Fugax
- Perianal infections
- Fistula-in-ano
- Proctitis

Bleeding

- Solitary Rectal Ulcer
- Proctitis
- Rectal tumour
- Coagulation defects
- Trauma

Young - Proctitis

Aged - Cancer

Treatment - Acute Thrombosis

- Differentiate from rectal prolapse
- Bed rest
- Analgesia
- Ice packs
- Stool softeners
- Debridement haemorrhoidectomy

Treatment - Chronic Symptoms

- Rule out proctitis / rectal cancer
- Diet - Hi fibre
- Creams of little use
- Surgery tailored to patient

Treatment - Chronic Symptoms - Surgery

Less agressive

- Injection Sclerotherapy
- Rubber Banding

Little prolapse

Minor External

Haemorrhoidectomy

- Milligan-Morgan
- Ferguson
- Longo (stapling)

Major prolapse

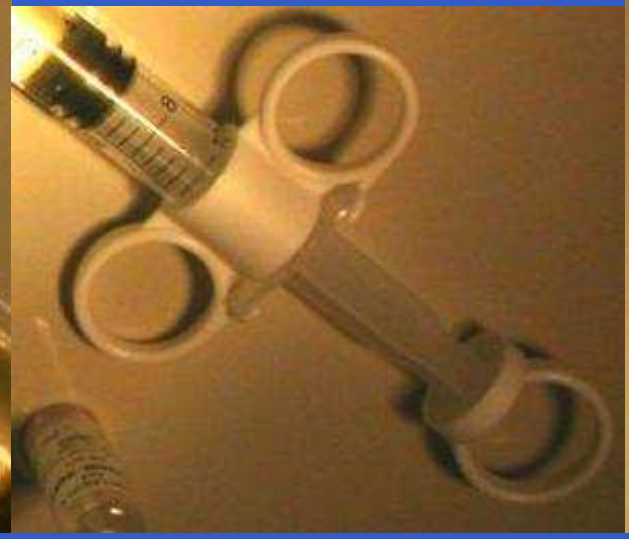
Major External

Injection Sclerotherapy - What

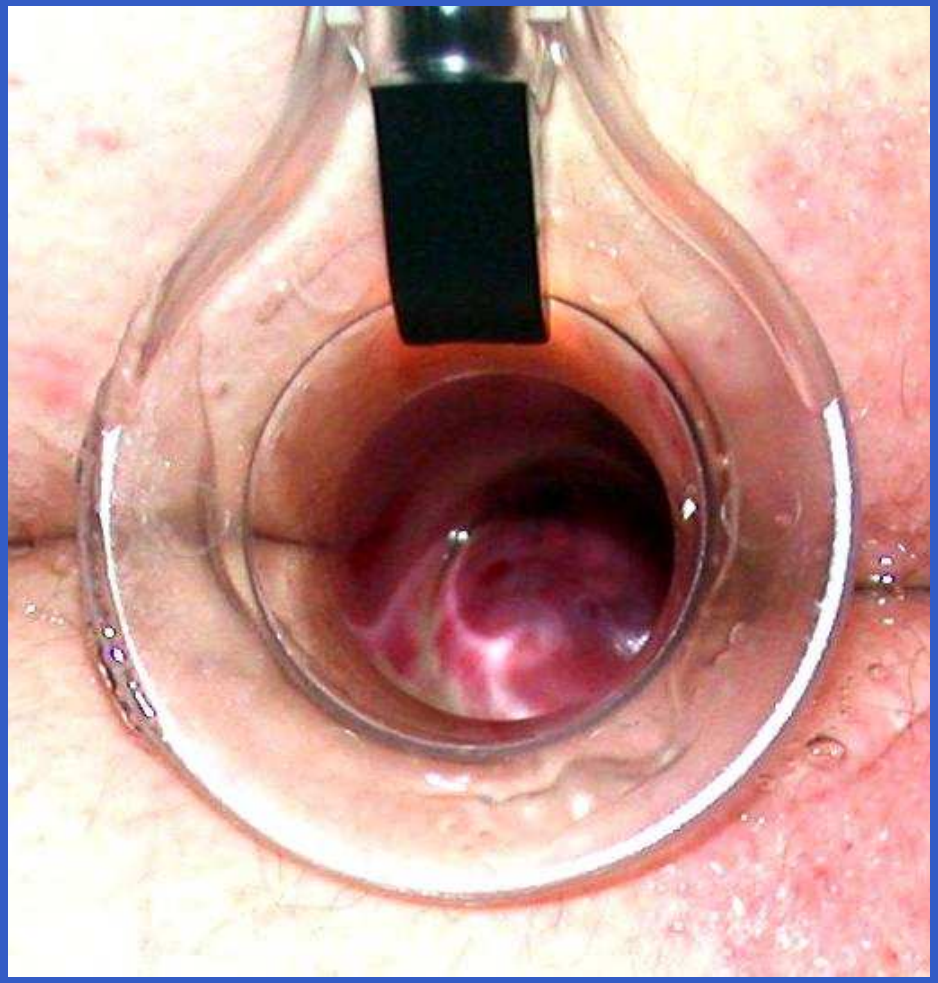
Phenol in almond oil

- Phenol; sclerosant
- Almond oil; prevents diffusion

Injection Sclerotherapy - How


Injection Sclerotherapy - Where



- 3 ml
- Above dentate line
- Bleb don’t blanch
- Avoid anterior

Injection Sclerotherapy - Complications

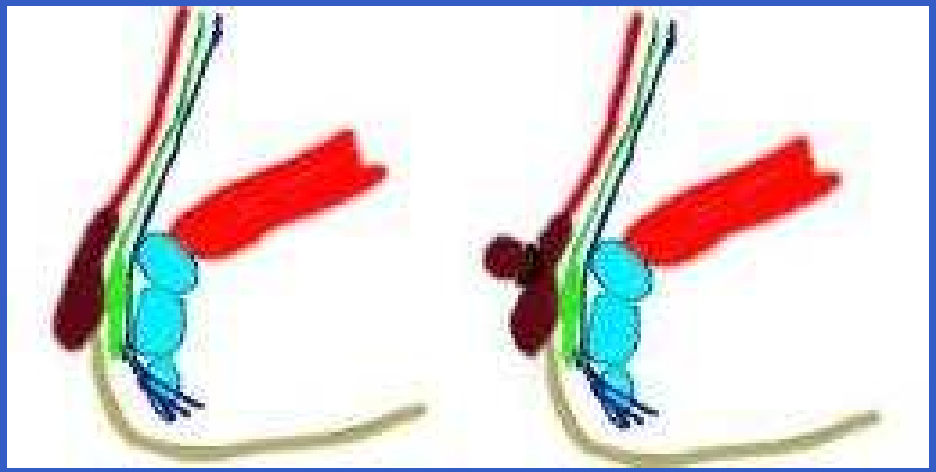
- Injection too superficial - Bleeding
- Injection too deep - Sepsis, Impotence
- Failure to shrink
- Recurrance

Not as durable as banding, but less painful

A. J. Sim, J. A. Murie, and I. Mackenzie. Surgery Gynecol Obstet, 157(6):534-6, December 1983.

Rubber Banding

Introduced 1963 by Barron in Detroit



Placed 1.5 cm above dentate line

Rubber banding - Results

- More effective than injections
- More painful than injections
- Reasonable durability

Time	Symptom free
5 y	70%
10 y	50%

D. Savioz, B. Roche, T. Glauser, et al. Int J Colorectal Dis, 13(4):154-6, 1998.

Milligan-Morgan Haemorrhoidectomy

Indications

- Large external haemorrhoids accompanined by
  - Pruritis
  - Pain
  - Swelling
- Significant prolapse
- Significant external component

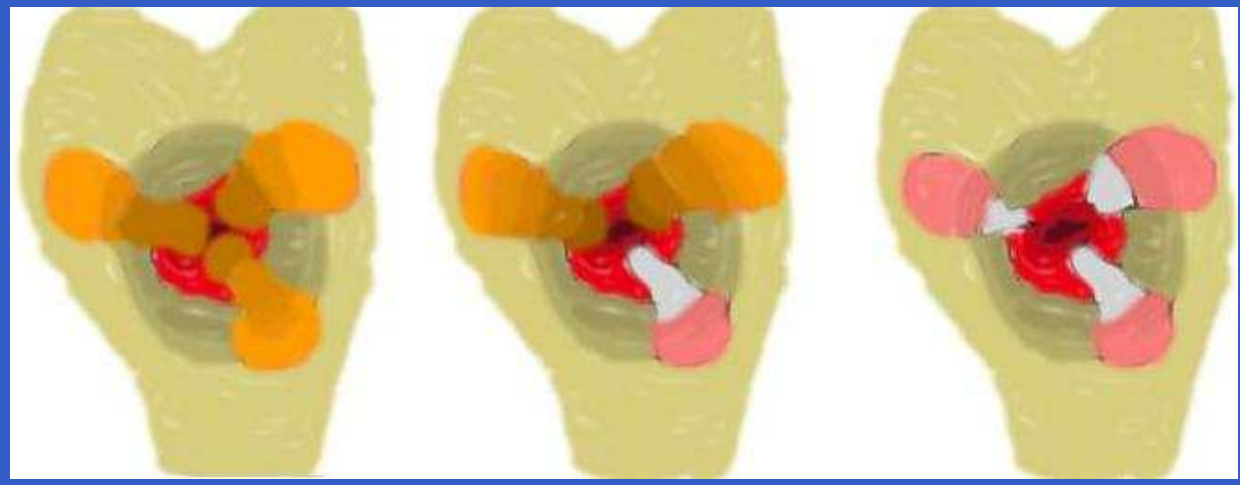
Milligan-Morgan Haemorrhoidectomy - Pain

Reducing pain post haemorroidectomy

- Lactulose taken for 4 days beforehand
- Post operative metronidazole, 400 mg PO TDS for seven days
- Avoid stitches / Big stitches
- Field block with long acting anaesthetic
- No roll in anus or use alginate roll

Pain minimisation is key to day case surgery

Milligan-Morgan Haemorrhoidectomy - Procedure



If it looks like a Clover

Your trouble is over

If it looks like a Dahlia

It is sure to be a failure

Milligan-Morgan Haemorrhoidectomy - Post op care

- Pack out
- Analgesia (Distalgesic 2 QDS PO)
- Avoid over agressive intra-op fluids (urinary retention)
- Lactulose 10 ml TDS
- Sitz baths
- Metronidazole 400 mg TDS PO, x 7 days
- Expect small amount of blood from wounds
- Report, urinary retention, failure to open bowels by third day
- Warn about heavy bleeding D10-D14; urgent attention

Milligan-Morgan Haemorrhoidectomy - Complications

- Immediate
- Medium
- Long

Immediate

- Pain
- Bleeding (4%)
- Urinary retention (50% to 0.5%)

Milligan-Morgan Haemorrhoidectomy - Complications

Medium

- Secondary Haemorrhage at D10-D14, (1%)
- Sepsis
- Incontinence

Long

- Anal stenosis (2%)
- Incontinence (0.4%)

Milligan-Morgan Haemorrhoidectomy - Results

- More painful than injections, banding
- More durable than injections, banding
- Quicker healing compared to Ferguson

E. A. Carapeti, M. A. Kamm, P. J. McDonald, et al. Br J Surg, 86:612-3, 1999

Longo procedure - Stapling

- First reported in 1998
- Slight similarity to Whitehead and Delorme operations
- Less pain and quicker return to work

B. Mehigan, J. Monson, and J. Hartley Lancet, 355:782-5, 2000

E. Ganio, D. F. Altomare, F. Gabrielli, et al Br J Surg, 88:669-74, 2001

- Long term results not as good, however

H Ortiz, J. Marzo, and P. Armendariz. Br J Surg, 89(11):1376-81, November 2002.

Thanks

Look for the pdf download (287 K), and online expanded lecture at http://eilise.homelinux.org

Questions please