COMMON ANORECTAL DISORDERS

WHEN AND WHAT TO REFER

Amir Darakhshan MB BS MD FRCS(Gen)
Consultant Colorectal and General Surgeon

The London Rectal Clinic, London Colorectal Group
Guys and St Thomas’ Hospitals
COMMON BENIGN CONDITIONS

Rectal bleeding

▪ Haemorrhoids
▪ Anal fissure
▪ Anal fistula

Pilonidal sinus
HAEMORRHOIDS CLASSIFICATION

Internal

- 1° PR Bleed
- 2° Prolapse and return
- 3° Manually reduce
- 4° Remain prolapsed
- Strangulated / Thrombosed

External component
HAEMORRHOIDS

CAUSE

Anal cushions
Loss of structure
- Straining, lifting, raised intra-abdominal pressure
- Hereditary

Engorgement, congestion
Bleeding
Prolapse
Thrombosis
HAEMORRHOIDS
CLASSIFICATION
HAEMORRHOIDS
CLASSIFICATION
HAEMORRHOIDS
CLASSIFICATION
HAEMORRH OIDS
TREATMENT RATIONALE

*Natural history of haemorrhoids is to recur unless excised or otherwise destroyed*

Modify behaviour/stool consistency
- Dietary advice / laxatives / fluids
- Exercise
- Defaecatory habit
- Biofeedback

Outpatient procedures
- Sclerotherapy
- Banding
- RF ablation

Theatre
- Haemorrhoidectomy
- HAL
- PPH
TO TREAT OR NOT TO TREAT
WHICH TREATMENT?

Evidence
- Poorly controlled; Conflicting; Short follow up
- Surgery > Banding > Sclerotherapy > Diet

Fibre = Placebo Injection = Fibre

Recurrence
- common after banding / injection
- low after haemorrhoidectomy

Haemorrhoidectomy best long term option
- 3° and ? 2° degree piles
- ? More radical approach
HAEMORRHOIDS
TOPICAL AGENTS  1ST DEGREE

Popular
- Non prescription
- Local anaesthetic
- Steroids
- Relief pain, bleeding
- Evidence ? Natural history of disease

- Daflon 500
  - Europe/Far East, not UK
  - Flavinoids (diosmin, hesperidin)
  - Noradrenaline effect
    - Increases venous tone, increase small vessel, reduced PG mediated inflammation

- Delay presentation with rectal bleeding
INJECTION

2\textsuperscript{ND} AND 3\textsuperscript{RD} DEGREE

5\% oily phenol

Submucosal

Inflammation
  \begin{itemize}
    \item Reduced blood flow
  \end{itemize}

Fibrosis
  \begin{itemize}
    \item Contraction
    \item Reduction of prolapse
  \end{itemize}

Short term benefit

70\% success

Recurrence
INJECTION COMPLICATIONS

Bleeding

Pain

Inadvertent prostatic injection
- Chemical prostatitis
- Erection
- Haematuria
- Haemospermia
- Urinary retention

Bacteraemia / septicaemia (rare)
BANDING

2\textsuperscript{ND} AND 3\textsuperscript{RD} DEGREE

Apex of haemorrhoid

Necrosis, sloughing of tissue

Fibrosis

Reduced engorgement, prolapse

60-80\% effective

Recurrence

Combine with haemorrhoidectomy
BANDING

COMPLICATIONS

39 studies, 8060 patients
- Pain 5.8%
- Failure / recurrence 2.8%
- Haemorrhage 1.7% (up to 5%)
- Skin tag 1%
- Urinary retention 0.04%
- Life threatening septicaemia - rare
- Total 14%

HAEMORRHOIODECTOMY
2\textsuperscript{ND}, 3\textsuperscript{RD} AND 4\textsuperscript{TH} DEGREE
DAY-CASE

Pre-Op
\begin{itemize}
  \item Counselling, Information booklet
  \item Commence cathartics prior to admission
\end{itemize}

Intra-Op
\begin{itemize}
  \item Bupivacaine / adrenaline infiltration
  \item Diathermy, No tie technique
  \item Voltarol supps
\end{itemize}

Post-Op
\begin{itemize}
  \item Continue cathartics
  \item Commence Flagyl
  \item Nurse specialist contact
\end{itemize}
HAEMORRHOIDECTOMY
HAEMORRHOIDECTOMY
IN THE CLOVER
HAEMORRHOIDECTOMY

COMPICATIONS

Pain
• 4 days, 2 weeks

Fissure
• Failure to heal
• GTN ointment

Abscess
• Rare

Incontinence /Passive soiling
• Transient
• Internal sphincter injury

Anal stenosis
• No mucocutaneous bridges
HAEMORRHOIDAL ARTERY LIGATION

HAL

Dopple guided — DGHAL
Transanal Haemorrhoidal Dearterialisation - THD
HAL

Ligation of feeding vessels
- Branches of superior rectal artery

Located with intrarectal probe and Doppler

Good for bleeding

Additional recto anal repair (RAR) for prolapse

Less painful than haemorrhoidectomy

Results at more than 1 year follow up
- Symptoms: bleeding 10%, pain on defaecation 9%, prolapse 11%

Similar outcome without use of Doppler
- At 4 weeks: Bleeding 4%, pain 4%, prolapse 2%
HAEMORRHOIDAL ARTERY LIGATION
RECTO ANAL REPAIR
HAL + RAR
## DGH AL

### RESULTS

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>No</th>
<th>Grade</th>
<th>Success (%)</th>
<th>Complications</th>
<th>Follow up (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Israel</td>
<td>2006</td>
<td>100</td>
<td>II &amp; III</td>
<td>94</td>
<td>5 admissions</td>
<td>6</td>
</tr>
<tr>
<td>Austria</td>
<td>2006</td>
<td>308</td>
<td>II / III IV</td>
<td>&gt;75 40</td>
<td>29% (incontinence 5)</td>
<td>18</td>
</tr>
<tr>
<td>Malta</td>
<td>2005</td>
<td>68</td>
<td>III</td>
<td>&gt;91</td>
<td>7.3%</td>
<td>11</td>
</tr>
<tr>
<td>Spain</td>
<td>2005</td>
<td>32</td>
<td>III &amp; IV</td>
<td>59</td>
<td>12%</td>
<td>12</td>
</tr>
<tr>
<td>Mexico</td>
<td>2004</td>
<td>49</td>
<td>II &amp; III</td>
<td>100</td>
<td>?</td>
<td>4</td>
</tr>
<tr>
<td>Italy</td>
<td>2004</td>
<td>138</td>
<td>II &amp; III</td>
<td>90</td>
<td>“Low”</td>
<td>6</td>
</tr>
<tr>
<td>Germany</td>
<td>2004</td>
<td>248</td>
<td>I to IV</td>
<td>62</td>
<td>“Low”</td>
<td>2</td>
</tr>
<tr>
<td>USA</td>
<td>2001</td>
<td>60</td>
<td>II &amp; III</td>
<td>90</td>
<td>16%</td>
<td>?</td>
</tr>
<tr>
<td>Morinaga Japan</td>
<td>1995</td>
<td>116</td>
<td>Internal</td>
<td>75 –95</td>
<td>0</td>
<td>weeks</td>
</tr>
</tbody>
</table>
STAPLED HAEMORRHOIDECTOMY
PPH, ANOPEXY

Strip Mucosectomy
PPH
PPH
PPH
PPH

Aimed at correcting prolapse and engorged haemorrhoids
Circumferential prolapse
Excision of redundant lower rectal mucosa
Fixation to reduce recurrence
External components/tags persist

Rapid recovery post-op
Decreased post-op pain
Early return to work
PPH
COMPLICATIONS

Urgency ~ 30%
Bleeding
Sepsis – local, pelvic, systemic
Urinary retention
Severe persistent pain
Thrombosed haemorrhoids
Recurrence

Gabrielli et al, Dis Col Rectum 2001; 44(6):842
HAEMORRHOIDS
RADIOFREQUENCY ABLATION

Very high frequency radio waves 4 MHz
Probe remains cold
Causes superficial tissue only

Unlike diathermy
- Lower frequency 0.5-1.5 MHZ
- Hot probe
- Deep thermal injury

Minor pain

OPD treatment

High recurrence rates; repeat treatment; safe
HAEMORRHOIDS
MANAGEMENT - SUMMARY

Natural history
- Recurrence is the norm
- Most patients will represent (EXCEPT SURGERY)

- Rule out proximal disease
  - DR Examination, proctoscopy/rigid sigmoidoscopy
  - Flexible sigmoidoscopy, colonoscopy
  - Reassurance

- Choice of treatment
  - Severity, frequency of symptoms
  - Bleeding/prolapse
  - Patient age and expectation
HAEMORRHOIDS
MANAGEMENT - PERSONAL PREFERENCE

- Bleeding and/or prolapse
  - Soft bulky stool
  - Correct toilet technique
  - Endoscopy and review
- Improvement: reassure, continue above

- Ongoing severe symptoms, young, active, occupation
  - Intervention
  - Bleeding: HAL, haemorrhoidectomy
  - Prolapse: Haemorrhoidectomy +/- HAL, PPH
ANAL FISSURE

Pain
• During and after BO

Bleeding

Difficult defaecation

Urinary symptoms
CHRONIC ANAL FISSURE

Persisted for longer than 3 months

Anal ulcer

Exclude other underlying pathology

Feature of chronicity

- Fibrosis of edges
- Visible IAS
- Sentinel Tag
CRONIC ANAL FISSURE
PATHOGENESIS

High resting anal pressure
- Possible trauma

Deficient blood supply anoderm
- Midline: laser Doppler flowmetry, post mortem
- With LAS
  - Reduced pressure, increased pressure

Normal resting anal pressure in some
- Chronic straining, digitation, post partum
- Often anterior
**ANAL FISSURE MANAGEMENT**

Most heal spontaneously
- Soft, bulky stool
- Dietary fibre, stool softeners, fluids
- Analgesia

Chronic fissure
- Topical cream/ointments (GTN/Diltiazem)
- BOTOX
- Lateral internal anal sphincterotomy
- Advancement flap
ANAL FISSURE
WHICH TREATMENT

Ease of use
Recurrence
Morbidity
Previous injury
Sex

Women
- Creams
- Botox
- LAS

Men
- Creams
- LAS
PHARMACOLOGICAL TREATMENTS

Dietry advice, laxatives

GTN 0.2% ointment Available commercially GTN 0.4% (POM) Rectogesic®
Diltiazem 2% cream (Pharma) Anoheal®

Similar efficacy 70%

(Nifedipine – trials. Not commercially available)
BOTOX FISSURECTOMY

Fissurectomy and injection of BOTOX

Botulinum A Toxin
- 30 - 100 units

Mode of action unclear

Complications
- Transient incontinence
- Perianal haematoma
- Pain
- Sepsis

Healing 50-60% (up to 92%)
MANUAL ANAL DILATATION
MAD

Uncontrolled disruption of sphincters
Incontinence 0-50%
Recurrence 5-30%
Not a recommended treatment
Ultrasound evidence of injuries
EAUS
NORMAL
EAUS
MANUAL ANAL DILATATION
LATERAL ANAL SPHINCTEROTOMY

Open or Closed

Division of lowermost internal anal sphincter

Extent
- 1 cm max
- Length of fissure

Lateral
- Away from fissure
- Less likely to cause deformity/guttering

Beware
- Previous / future anal trauma
- Surgery / Obstetric
LATERAL SPHINCTEROTOMY

Still Gold Standard

>95% healing rate

10-15% change in continence

Caution in women
## LAS - RESULTS

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>n</th>
<th>Success (%)</th>
<th>Recurrence (%)</th>
<th>Incontinence (%)</th>
<th>Follow-up (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abcarian</td>
<td>1980</td>
<td>150</td>
<td>100</td>
<td>1.3</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Gingold</td>
<td>1987</td>
<td>86</td>
<td>100</td>
<td>3.5</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Hananel</td>
<td>1997</td>
<td>312</td>
<td>98.6</td>
<td>1.4</td>
<td>--</td>
<td>NS</td>
</tr>
<tr>
<td>Hsu</td>
<td>1984</td>
<td>89</td>
<td>100</td>
<td>5.6</td>
<td>0</td>
<td>NS</td>
</tr>
<tr>
<td>Jensen</td>
<td>1984</td>
<td>30</td>
<td>100</td>
<td>3</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Garcia-Aguilar</td>
<td>1996</td>
<td>864</td>
<td>96</td>
<td>11</td>
<td>37.8</td>
<td>36</td>
</tr>
<tr>
<td>Keighley</td>
<td>1981</td>
<td>71</td>
<td>100</td>
<td>25</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Khubchandani</td>
<td>1989</td>
<td>717</td>
<td>97.7</td>
<td>NS</td>
<td>35.1</td>
<td>NS</td>
</tr>
<tr>
<td>Kortbeek</td>
<td>1992</td>
<td>112</td>
<td>95.5</td>
<td>NS</td>
<td>NS</td>
<td>1.5</td>
</tr>
<tr>
<td>Leong</td>
<td>1995</td>
<td>20</td>
<td>100</td>
<td>NS</td>
<td>0</td>
<td>6.5</td>
</tr>
<tr>
<td>Lewis</td>
<td>1988</td>
<td>350</td>
<td>94</td>
<td>6</td>
<td>6</td>
<td>37</td>
</tr>
<tr>
<td>Littlejohn</td>
<td>1997</td>
<td>352</td>
<td>99.7</td>
<td>1.4</td>
<td>1.4</td>
<td>9</td>
</tr>
<tr>
<td>Nyam</td>
<td>1999</td>
<td>585</td>
<td>96</td>
<td>8</td>
<td>15</td>
<td>72</td>
</tr>
<tr>
<td>Pernikoff</td>
<td>1994</td>
<td>500</td>
<td>99</td>
<td>2</td>
<td>16</td>
<td>67</td>
</tr>
<tr>
<td>Prohm</td>
<td>1995</td>
<td>177</td>
<td>96</td>
<td>3.3</td>
<td>1.6</td>
<td>1-1.5</td>
</tr>
<tr>
<td>Ravikumar</td>
<td>1982</td>
<td>60</td>
<td>97</td>
<td>0</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Romano</td>
<td>1994</td>
<td>44</td>
<td>100</td>
<td>0</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Usatoff</td>
<td>1995</td>
<td>98</td>
<td>90</td>
<td>20</td>
<td>18</td>
<td>41</td>
</tr>
<tr>
<td>Walker</td>
<td>1985</td>
<td>306</td>
<td>100</td>
<td>0</td>
<td>15</td>
<td>52</td>
</tr>
<tr>
<td>Weaver</td>
<td>1987</td>
<td>39</td>
<td>93</td>
<td>5.1</td>
<td>2.5</td>
<td>17</td>
</tr>
</tbody>
</table>
ANAL FISSURE
ISLAND ADVANCEMENT FLAP

Indications
- Low/normal pressure fissure e.g. obstetric
- Recurrent fissure
- Previous MAD or LAS
- Failure to heal after LAS

n=21 patients treated
100% healed

No major complication

Breakdown

ANAL FISTULA

Pain, discharge blood and pus

Intermittent

Often previous abscess

Commonly cryptogenic

Possible IBD

Simple, low or very complex, horse-shoe

4 categories

- Inters-phincteric, trans-sphincteric, supra-sphincteric, extra-sphincteric
- Crohn’s: anything possible
PARK'S CLASSIFICATION

1. Intersphincteric
2. Transsphincteric
3. Suprasphincteric
4. Extrasphincteric

Secondary tracks
TREATMENT OPTIONS

Aim
- Drain sepsis
- Preserve function

Low fistula
- Lay open / core-out fistulectomy

High / complex fistula
- Loose seton
- Fistula plug 40-60%
- Permacol paste 40-60%
- Ligation of Intersphinctric Fistula Track (LIFT) procedure 60 - 90%
- Advancement flap 80% success transphincteric fistula, 60% suprasphincteric
ANAL FISTULA

SETON
FISTULECTOMY
PILONIDAL SINUS
PILONIDAL SINUS SURGERY

Excision and primary suture
Excision / lay open
Bascum procedure
Karydakis eccentric closure method
Transposition flap
Rotation flap
Limberg (rhomboid) Flap
# Pilonidal Sinus

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Recurrence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incision &amp; drainage</td>
<td>60</td>
</tr>
<tr>
<td>Excision, lay open and packing</td>
<td>28</td>
</tr>
<tr>
<td>Excision and primary closure</td>
<td>33</td>
</tr>
<tr>
<td>Karydakis</td>
<td>1-4</td>
</tr>
<tr>
<td>Excision and Z-Plasty</td>
<td>0</td>
</tr>
</tbody>
</table>
KARYDAKIS FLAP

Eccentric ‘D’ shaped incision and excision of sinus
Across midline mobilisation of flap and primary suture in layers
Purpose: eliminate midline cleft
LIMBERG FLAP
LIMBERG RESULT

Two weeks:
R/O sutures

3 – 4 weeks

6 weeks
QUESTIONS