ANORECTAL SURGICAL EMERGENCIES

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ANORECTAL DISORDERS
SYMPTOMS AND SIGNS

Symptoms
- Pain
- Bleeding
- Protrusion
- Seepage & Soilage
- Itching
- Change in BM

Signs
- Tenderness
- Fluctuance
- Erythema
- Mass

COMMON MISCONCEPTION

- Reluctance to seek medical attention
- Fear of pain
- Fear of cancer

ANORECTAL DISORDERS
HEMORRHOIDS

ANATOMY

- Hemorrhoids
- Fissure
- Abscess/Fistula
- Anal/rectal Cancer
- Perianal Crohn’s
- Rectal prolapse

- Vascular cushions
  - Blood vessels
  - Connective tissue
  - Smooth muscle

- Constant position
  - Left lateral
  - Right anterior
  - Right posterior
ANORECTAL DISORDERS
HEMORRHOIDS
NORMAL ANATOMY
- External hemorrhoids
  - Distal to the dentate line
  - Squamous epithelium (skin)
  - Nerve endings
- Internal hemorrhoids
  - Proximal to the dentate line
  - Columnar epithelium (mucosa)
  - No nerve endings

HEMORRHOIDS
SYMPTOMS
- Internal
  - Bleeding
  - Protrusion
  - Seepage/soilage
  - Staining
  - Pruritus
  - Rarely painful

ANORECTAL DISORDERS
HEMORRHOIDS
INTERNAL HEMORRHOIDS
Management

- Grade I & II
  - Dietary / Lifestyle Changes
    - Ointments & Creams
    - Suppositories
    - Fiber Diet
    - Water
    - Stool softeners
    - No Reading on the toilet
    - Sitz baths

- Grade I, II, III
  - Office Treatments
    - Rubber Band Ligation
    - Infrared Coagulation
    - Sclerotherapy

- Grade III and IV
  - Surgical Treatments
    - Traditional Excisional
      - Ferguson (Closed)
      - Milligan Morgan (Open)
      - Utilizing Scalpel, RF (LigaSure), Ultrasonic, cautery
    - Circumferential Mucosal Resection
    - Stapled (PPH)

- Grade IV
  - Mixed internal and external
  - Hemorrhoidal necrosis warrants emergent operation (similar to rectal prolapse with necrosis)
ANORECTAL DISORDERS
INTERNAL HEMORRHOIDS

Electrocautery, Cold Scissors, Laser, Harmonic Scalpel, LigaSure

CLOSED HEMORRHOIDECTOMY

<table>
<thead>
<tr>
<th></th>
<th>Limited</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>115</td>
<td>133</td>
</tr>
<tr>
<td>Follow-up(yrs)</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Initial Improvement</td>
<td>96%</td>
<td>98%</td>
</tr>
<tr>
<td>Recurrent Symptoms</td>
<td>34%</td>
<td>29%</td>
</tr>
<tr>
<td>Medical Treatment</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>Re-Intervention</td>
<td>3%</td>
<td>1%</td>
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</table>

Hayssen et al, DCR 1999

CLOSED HEMORRHOIDECTOMY

Complications
- Pain: 100%
- Urinary retention: 2 - 36%
- Bleeding: 0.03 - 6%
  - Pregnancy (5%)
  - Emergency (4%)
- Stenosis: 0 - 6%
- Incontinence: 2 - 12%
- Infection: 0.5 - 5%

Madoff RD Gastro 2004

TREATMENT OF THE POST-OPERATIVE PAIN

- Long-term local anesthetic
- Avoid fecal impaction- fiber and laxatives
- Heat- sitz baths
- NSAIDS
- Narcotics
- 10% Metronidazole gel
- 5% Lidocaine ointment
- 0.2% Nitroglycerine ointment
ANORECTAL DISORDERS
EXTERNAL HEMORRHOIDS
- Protrusion/lump
- Pain if thrombosed
- Bleeding only if ruptured
- Symptomatic relief
  - Sitz baths
  - Stool softeners
  - Pain medications
- Excision not just thrombectomy due to high rate of recurrence

THROMBOSED EXTERNAL HEMORRHOID
PAIN VS. TIME

ANORECTAL DISORDERS
ANAL FISSURES
- Acute
  - superficial
  - heal spontaneously
- Chronic
  - > 2 months
  - exposed internal anal sphincter (IAS)
  - indurated edge of fissure
  - sentinel tag/hood
  - hypertrophied anal papilla
- Affects both genders
- Majority in Posterior Midline
  - Men 92%
  - Women 75%
  - Anterior and Posterior 3%

ATYPICAL ANAL FISSURE
Those in lateral locations, multiple, non-tender associated with fever, weight loss, diarrhea, significant bleeding may be indication for systemic disease
Diff Dx: Crohn’s, Anal Cancer, Herpes, Leukemia, TB, Trauma
**ANAL FISSURE**

**PRIMARY SYMPTOMS**

- Pain with defecation
- Pain that lingers after BM
- May have started with hard BM or period of constipation
- Bleeding not common

**ANAL FISSURE**

**ISCHEMIA + ANAL HYPERTONIA?**

- Posterior midline anoderm has lowest blood flow of all four quadrants
- Posterior midline perfusion inversely proportional to resting pressure
- Anal fissure pts with highest pressure, lowest blood flow
- Pain increases sphincter spasm
- Sphincterotomy corrects both hypertonia and hypoperfusion and leads to healing

**ANAL FISSURE**

**TREATMENT**

- Hydration
- Bulking agents
- Sitz baths
- Topical analgesics
- Nitroglycerine ointment
- Calcium channel blockers
- Botulinum toxin
- Lateral internal sphincterotomy

**CONTINENCE DEFECTS AFTER LIS**

- Increasing Risk of Incontinence
- Increasing Chance of Cure

![Graph showing continence defects after LIS](Garcia-Aguilar J et al, DCR 1996)
### LARGEST RCTS OF HEALING GTN THERAPY

<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Healed(%)</th>
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<tbody>
<tr>
<td>Lund 1997</td>
<td>80</td>
<td>68*</td>
</tr>
<tr>
<td>Carapeti 1999</td>
<td>70</td>
<td>66*</td>
</tr>
<tr>
<td>Richard 2000</td>
<td>82</td>
<td>27</td>
</tr>
<tr>
<td>Altomare 2000</td>
<td>119</td>
<td>38</td>
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<tr>
<td>Bailey 2002</td>
<td>304</td>
<td>39</td>
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<tr>
<td>Sonmez 2002</td>
<td>47</td>
<td>65</td>
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* 27% Relapse Rate in follow up studies of healed pts

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### ANAL FISSURE GTN VS LIS

- Chronic anal fissure patients
- Multicenter randomized, controlled trial of Canadian Colorectal Surgical Trials Group
- LIS vs. 0.25% GTN TID
- Standardized conservative therapy
- Follow-up at 6 wks and 6 mos

**Richard CS et al DCR 2000**

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### GTN vs. LIS

- 6 weeks: 24% GTN, 30% LIS
- 6 months: 90% GTN, 92% LIS

* 0.25% GTN
** LIS

* p=5x10^-6
** p=3x10^-9

**Richard CS et al DCR 2000**

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### GTN vs. LIS

- Side effects: 84% GTN, 30% LIS
- Subsequent surgery: 45% GTN, 3% LIS

* 0.25% GTN
** LIS

* p <0.001
** p=9x10^-6

**Richard CS et al DCR 2000**
**ANAL FISSURE**

**CCB VS. GTN**

<table>
<thead>
<tr>
<th>Author</th>
<th>N</th>
<th>Healing(%)</th>
<th>HA(%)</th>
<th>FU</th>
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<tbody>
<tr>
<td></td>
<td>CCB</td>
<td>GTN</td>
<td>CCB/GTN</td>
<td></td>
</tr>
<tr>
<td>Kocher</td>
<td>50</td>
<td>77</td>
<td>86</td>
<td>26/59</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>(2%)</td>
<td>(0.2%)</td>
<td>12 wks.</td>
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<tr>
<td>Ezri</td>
<td>52</td>
<td>89</td>
<td>58</td>
<td>5/40</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>(0.2%)</td>
<td>(0.2%)</td>
<td>6 mo.</td>
</tr>
<tr>
<td>Bielecki</td>
<td>43</td>
<td>86</td>
<td>86</td>
<td>0/33</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td>(2%)</td>
<td>(0.5%)</td>
<td>8 wks.</td>
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**ANORECTAL DISORDERS**

**PERIANAL/PERIRECTAL ABSCESS**

Etiology: begin as infections in the anal glands that surround the anal canal and empty into the anal crypts at the dentate line. The ducts leading to and from these glands are thought to become obstructed as a result of feces or trauma.

**BOTOX**

### Complications and results of treatment in the two groups

<table>
<thead>
<tr>
<th>Complication</th>
<th>Group 1 (n = 38)</th>
<th>Group 2 (n = 38)</th>
<th>P</th>
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<tbody>
<tr>
<td>Infection</td>
<td>1 (2.6%)</td>
<td>1 (2.6%)</td>
<td>&gt;0.1</td>
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<tr>
<td>Hemorrhoids</td>
<td>1 (2.6%)</td>
<td>0 (0.0%)</td>
<td></td>
</tr>
<tr>
<td>Analstenosis</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2.6%</td>
<td>2.6%</td>
<td></td>
</tr>
</tbody>
</table>

3 yr follow-up

The Origin

The Ways of Extension

Unroofing the abscess cavity:
- Allows it to heal without the need for packing
- A small incision should be avoided as it requires painful packing to keep the skin open until the abscess cavity heals

ABSCESS-MANAGEMENT

- Supralevator space
- Intersphincteric space
- Ischiorectal space
- Perianal space
Patients are reluctant to seek medical attention
- Embarrassment
- Fear of pain
- Fear of cancer

Patients' lack of knowledge of the anorectal region results in every symptom being attributable to "hemorrhoids"

Look out for the serious problems
Maximize normal bowel function before considering an intervention