Common Anorectal Disorders:
Anal fissure, Fistula-in-ano, Perianal Abscess, Pilonidal Disease, Hemorrhoids

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Anorectal Disease

- Overview Anal Anatomy
- Anal Fissure
- Perianal Abscess/Fistula
- Pilonidal Disease
- Hemorrhoids

Anorectal Anatomy
Anal Fissure

- Linear tear in distal anal canal between dentate line and anal verge
- Usual location: posterior midline
- Occurs equally in both sexes
- Constitutes about 15% of referrals to colorectal surgery office

Anal fissure

University of Rochester Medical Center

Anal Fissure

ANAL FISSURE - CLASSIFICATION

- ACUTE FISSURE
  Painful cleft in the anoderm exposing submucosa and possibly the internal sphincter
- CHRONIC FISSURE
  Anodermal cleft with scarred base and surrounding inflammation. Frequently seen with hyperplastic anal papilla and "vesiculated pile"
### Anal Fissure

**SYMPTOMS:**
- Pain-post defecation – can be severe
- Spasm
- Bright red blood
- Burning / pruritus
- Painful lump (Sentinel Tag)

### Anal Fissure

**ETIOLOGY:**
- Trauma-tearing of anal lining
- Hard stools with straining
- Diarrhea
- Hypertonic/spastic internal sphincter

### Anal Fissure

![Location of Anal Fissures](image-url)
Diagram

**Anal Fissure**

**Diagnosis**

History **ALONE**

Physical Exam will confirm the diagnosis

- Inspection—most fissures can be seen
- Palpation—confirms sphincter spasm
- Digital examination—frequently UNABLE

**Management/Treatment**

Avoid prolonged sitting on the toilet
Avoid straining
Avoid and treat constipation/diarrhea
Take psyllium fiber daily
Increase the dietary fiber
Increase water/fluid ingestion
Avoid caffeine-diuretic effect
Use cotton balls or Hypoallergenic baby wipes for hygiene

**Anal Fissure**

Management/Treatment

Warm baths/Sitz baths to relieve sphincter spasm
decreases resting anal pressure which stops the spasm
Anal Fissure

Prescription Treatment
Topical anesthetics-Lidocaine jelly 2%
Nitroglycerin ointment
Calcium channel blockers

Anal Fissure

Treatment:
Botulinum toxin (Botox) injection
Injected into the internal anal sphincter

Anal Fissure

Surgical Management
Lateral internal sphincterotomy
Anal surgical stretch
Anal advancement flap
Perianal Abscess & Fistula

Anorectal abscesses ("Acute phase")
- 100,000 cases per year
- Age range 20-60, 2:1 ratio M:F
- 30% recurrence rate

Anorectal fistula ("Chronic phase")
- 25-40% of abscesses lead to fistula
- 10-20% recurrence rate

8-12 anal glands entering the anal canal in crypts at the dentate line-cryptoglandular
Perianal Anal Abscess and Fistula

Pathogenesis
- Plugging of duct
- Retention/entry of bacteria
- Expansion along perirectal spaces

Perianal Abscess and Fistula

Symptoms
- Worsening perianal pain or deep rectal pain-constant
- Pain unrelated to bowel activity
- Increasing local pressure
- Increasing perianal swelling (may be hidden depending on location)
- Positional aggravation of pain (sitting, walking)
- Possible fever, urinary retention, rarely sepsis (maximum-Fournier gangrene)

Symptoms may be masked in immunocompromised patients (pain without abscess formation)

Perianal Abscess and Fistula

Treatment
1. Identify point of maximal swelling, erythema
2. Incision and drainage: cruciate incision

Adequate drainage results in rapid improvement.

Limited role for antibiotics after drainage
Perianal Abscess and Fistula

Anal Fistula (Fistula-in-Ano) a granulation tissue-lined track kept open by the infective source
- Internal opening
- Primary tract
- External opening

Clinical Presentation of anal fistula

Perianal discharge; intermittent or constant; purulent or bloody; often throbbing pain prior to discharge.

Cyclic symptoms:
- Abscess with increasing pain
- Rupture/I&D with drainage of pus
- Cooling off with healing of skin
- Recurrent
Perianal Abscess and **Fistula**

**Evaluation**

**History**

**Clinical Examination:**
- *External inspection-identification of fistula opening*
- *Anoscopy - rule out tumor, hemorrhoids etc*

**Imaging studies:** fistulogram, MRI, endorectal ultrasound.

If symptoms are recurrent, perianal Crohn’s disease should be considered.

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**Surgical Options**

- **Seton placement** - used frequently
- **Fistulotomy**
  - Excellent healing rates - risk of incontinence
- **Fibrin glue** - not covered by most insurance
- **Endoanal plug** - not covered by most insurance
- **Advancement flap**

*All offer success rate of only 50-60%*
**Anal Abscess and Fistula**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Seton</th>
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<tr>
<td>A seton (Latin seta, a bristle) is used to reduce risk of anorectal sepsis.</td>
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**Seton placement**
- Preserves external sphincter
- Allows drainage of sepsis, fibrosis of tract
- Allows initiation of medical therapy in Crohn’s
- May be left indefinitely

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**Perianal Abscess and Fistula**

**Outcome**

- Recurrence of fistula: >10-35% for all methods
- Risk of incontinence: 0-15% stool 0-25% flatus

There is no perfect solution!
Pilonidal Disease

DEFINITION

- Pilonidal translates to "hair nest"
- Localized infection of the skin and subcutaneous tissue at or near the upper part of the natal cleft of the buttocks.
• Pilonidal cavities are not true cysts
• Generally contain hairs and debris
• Fistulous tracts extending to the skin

PATHOGENESIS
• Specific mechanism unclear
• Hair and inflammation contributing factors
• Open pore or ‘pit’ develops
• Collect debris and embedded hairs
• Negative pressure is created in the subcutaneous space, drawing hair deeper into the pore

PATHOGENESIS
• Sinus tract forms
• Typically, sinus tracts extend cephalad
• Once pore becomes infected, an acute subcutaneous abscess develops
• Recurring or chronic infection can also develop in the affected area due to a retained hair or infected residue
ETIOLOGY

• Current theory: acquired rather than congenital
  • If congenital, surgery should be a cure
• Recurrence is consistent with an acquired origin
• Risk of recurrence:
  ▪ 30-50% after first episode
  ▪ 80-90% after two episodes

CONTRIBUTING FACTORS

• Sedentary occupation (44%)
  ▪ Prolonged sitting
• Local irritation or trauma (34%)
  ▪ Jeep drivers in WWII
  ▪ “Jeep Disease” responsible for about 80,000 hospitalizations among troops
• Obesity
• Deep natal cleft
• Family History: 12% first-degree relatives

EPIDEMIOLOGY

• Mean age at presentation:
  ▪ 19 years old females
  ▪ 21 years old males
• Men are affected two to four times more often than women
  ▪ Rarely seen in children or adults over 45

Doll, D, Dis Colon Rectum. 2009 Sep;52(9):16
### CLINICAL PRESENTATION

<table>
<thead>
<tr>
<th>Acute abscess</th>
<th>Chronic sinus tracts/pits</th>
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<tr>
<td>• Pain - inability to sit</td>
<td>• Intermittent discomfort</td>
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<tr>
<td>• Erythema</td>
<td>• Intermittent drainage</td>
</tr>
<tr>
<td>• Swelling</td>
<td>• Skin irritation</td>
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<tr>
<td>• Purulent drainage</td>
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### SINUS TRACTS

![Image of sinus tracts]

### Treatment

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Acute Abscess
Incision and drainage

- Office procedure
- Malodorous drainage
  - Anaerobes - bacteroides
  - Staphylococcus aureus
- Visible hair debrided
- Sitz bath
- No antibiotics unless cellulitis present
- Relief of symptoms in majority of patients
- Brief recovery

Acute abscess

- Pack with Nu gauze
- Pt will remove next day & start Sitz
- Office follow up in 7-10 days
HAIR REMOVAL

• Waxing, depilatory, clipping and plucking
  • Inconvenient and difficult for patients
  • Razor hair removal increases the rate of long-term recurrence after surgery

• Laser hair removal
  • Effective
  • Described as definitive non-operative treatment of recurrent pilonidal disease
  • Not covered by insurance

* Dis Colon Rectum. 2009 Jan;52(1):131-4

CHRONIC ABSCESS

• Recurrent drainage due to retained hair and infected residue
• Need for more definitive treatment
SURGERY

• Excision of all involved skin and subcutaneous tissue, the wounds may then be managed:
  • Open, with healing by secondary intention:
    • Advantage: Brief hospital stay
    • Disadvantage: Morbidity from prolonged healing and frequent, uncomfortable dressing change
  • Closed by primary suture:
    • Advantage: Significantly reduces healing time
    • Disadvantage: Longer hospitalization, primary dehiscence and infection

SURGERY

• Perianal abscess
• Hidradenitis suppurativa
• Anorectal fistula
• Skin abscess
• Folliculitis
• Perianal complications of Crohn’s disease

DIFFERENTIAL DIAGNOSIS
HIDRADENITIS SUPPURATIVA

- Inflammatory process of the apocrine sweat glands
- High incidence of chronicity
- Combo acute infection w/ multifocal suppuration & abscess formation
- Chronic smoldering, fistulizing process

HIDRADENITIS

Hemorrhoid

or is it?
“Hemorrhoids”

• Most common colorectal complaint
• Majority of patients associate any anorectal symptom with “hemorrhoids”

Hemorrhoids

• Hemorrhoid cushions are part of normal anal anatomy!
• Contribute to physiologic continence
  • Account for 15-20% of anal resting pressure
  • Keep pre-operative continence in mind

Anatomy

• Vascular cushions in anal submucosa
• Contain blood vessels, elastic & connective tissue
• Constant position
  • Left lateral
  • Right anterior
  • Right posterior
Anatomy

- External hemorrhoids
  - Squamous epithelium (skin)
  - Distal to the dentate line
    - Junction of superior and inferior anal canal
    - Somatic – sensitive to pain

Anatomy

- Internal hemorrhoids
  - Columnar epithelium (mucosa)
  - Proximal to the dentate line
    - Viscerally innervated
    - Sensitive to stretching
Etiology

- Elevated intra-abdominal pressure
- Pregnancy
- Constipation
- Weight lifting
- Chronic straining

All lead to sliding down of the cushions, stretching of the muscular support, and prolapse

Symptoms

Internal

- Bleeding
- Prolapse with defecation
- Seepage/soilage
- Itching
- Pain only with partial prolapse or incarcerated

Classification

Internal

- Grade I:
  - visualized on anoscopy; may bulge into the lumen; do not prolapse below the dentate line
- Grade II:
  - prolapse out of the anal canal with defecation or with straining; reduce spontaneously
- Grade III:
  - prolapse out of the anal canal with defecation or straining; require manual reduction
- Grade IV:
  - irreducible and may strangulate
Symptoms
External

- Generally no symptoms
- Pain if thrombosed
- Difficult hygiene
- Aesthetics

Symptoms
Thrombosed

- Associated with pain
- Organization and resorption of clot occurs within several days following thrombosis
- Conservative tx
- Clot evacuation within 72 hours of symptoms

Fig 3-8. The timing of excision of a thrombosed external hemorrhoid.
Conservative treatment

- Hydration
- Limit bathroom time
  - No reading!
- Dietary modifications are always appropriate
  - 20 to 30 g/day dietary fiber
  - chronic management
  - prevention of recurrence

Psyllium Fiber

- Treats/helps most anorectal disorders
- Bulking agent
- Better than stool softeners, ointments, etc
- Very rarely do patients truly consume a “high fiber diet”
- 70% SUCCESSFUL WITH CONSERVATIVE MANAGEMENT
- Metamucil/Konsyl

FIBER

- 1 teaspoon per day
- Spoon into dry glass
- Fill ½ full with COLD water
- Stir quickly
- CHUG!
INTERNAL HEMORRHOIDS

Surgical Hemorrhoidectomy
- Failed previous treatments
- Mixed internal and external components
- Patient preference

Surgical therapy (Internal hemorrhoids)
- Banding
  - Office procedure
  - Grade II or III
- THD - Transanal Hemorrhoidal Dearterialization
- Excisional hemorrhoidectomy
  - Painful
  - Complications - urinary retention, bleeding, stenosis, incontinence, infection
It's NOT YOUR Hemorrhoids

- Pain and bleeding with/after bowel movement
- Forceful straining with bowel movement and severe constipation
- Blood mixed in with the stool
- Pus with your stool or after BM
- Anal fissure
- Pelvic floor abnormality
- CANCER?!?
- Abscess? Fistula? Inflammatory Bowel Disease?
Thank you!