Anorectal Pain

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Mr. Gwynn

- A 31 year-old man presents to the emergency room complaining of pain in his left buttock for 5 days and fevers for 3 days
History

What other aspects of Mr. Gwynn’s history would you like to know?
Consider the following:

- Characterization of the pain (e.g. onset, quality, severity, localization, radiation, associated symptoms)
- Presence of perianal masses and blood or fluid leakage
- History of trauma
- Changes in bowel movements and/or other GI symptoms
- Urinary symptoms (e.g. retention or dysuria)
- PMH (IBD, immunosuppression from HIV or meds)
- Relevant ROS, Meds, FH, SH
History, Mr. Gwynn

• **Characterization of the pain**
  - The pain is sharp and burning. It started gradually and has become progressively worse. It is localized to the inner half of the left buttock and does not radiate. It is exacerbated by sitting and bowel movements. Mr. Gwynn has taken several doses of Ibuprofen but they have not helped to relieve the pain.

• **Masses and fluid leakage**
  - Mr. Gwynn has noticed an enlarging bump over the area of pain. No fluid, stool, or blood has leaked from this area.
History, continued

- **Associated symptoms**
  - Mr. Gwynn has had intermittent fevers for 3 days, with a high of 103°

- **No history of trauma**

- **GI symptoms**
  - Pain with bowel movements but otherwise normal. No diarrhea, no bloody BMs. No nausea or vomiting.

- **No urinary symptoms**
History, continued

- Relevant PMH, PSH, Meds, Allergies, FH, SH
  - No relevant PMH
  - No prior surgery
  - Ibuprofen recently for pain, no other meds
  - No family hx. of IBD, colon cancer or other GI disease
  - No smoking hx. occasional ETOH, no drugs, sexually active with 1 female partner, uses condoms
What is your differential diagnosis?
Differential Diagnosis
Based on history

- Anorectal Abscess
- Thrombosed Hemorrhoids
- Anal Fistula
- Anal Fissure
- Anal or Rectal Cancer
- Hidradenitis Suppurativa
- Sexually Transmitted Infection
- Cellulitis
- Inflammatory Bowel Disease
Physical Exam

What specifically should you look for?
Physical Exam

- **Vitals:** T=39.2, P=124, BP=125/75, R=12
- **General:** well-developed young man sitting uncomfortably in bed
- **Lungs:** clear bilaterally
- **Heart:** tachycardic, regular, no m/r/g
- **Abdomen:** non-distended, normo-active BS, soft, non-tender
- **Rectal:** ~5cm swollen mass on inner aspect of L buttock, warm, indurated and extremely tender to palpation with a surrounding area of erythema. Mr. Gwynn will not allow you to perform a internal rectal exam as it is too painful!
- **The rest of the exam is within normal limits**
Physical Exam, continued

- A 5 cm, erythematous, tender, perianal mass found on exam
What labs would you like to order?
Labs

- WBC 15, 90% PMNs
- Hct 40, Platelets 400
- Chemistries - Normal
What is your working diagnosis?
Diagnosis, discussion

- Mr. Gwynn is a 32 year-old man presenting with 5 days of buttock pain and 3 days of fever. No N/V. No change in BMs. On exam he is febrile and has a erythematous, indurated, tender perianal mass. His abdomen is soft and non-tender. He has an elevated WBC.

- Mr. Gwynn most likely has an anorectal abscess
What would you like to do now?

Antibiotics?
Imaging?
Surgery?
Management

• Anorectal abscesses cannot be treated with antibiotics alone and require surgical drainage.

• Imaging (CT or anal u/s) can be helpful in cases of deep abscesses or those with more proximal GI involvement. However, Mr. Gwynn’s abscess is superficial on exam and his abdomen is benign.
Management

• Mr. Gwynn is given broad spectrum IV antibiotics and hydrated with 2L IV Normal Saline
• In the OR, Mr. Gwynn is sedated
• His anal canal is explored with an anoscope. No internal fistula opening is found. The anal mucosa is normal.
• His external abscess is opened broadly with a cruciate (cross shaped) incision to prevent the skin from closing over the abscess. This produces a large volume of purulent fluid that is sent for culture.
• The abscess cavity is copiously irrigated and a Mushroom shaped rubber drain (a tube with a “head” to keep it from falling out) is sutured in place.
Cruciate Incision (cross – like)
How would you manage Mr. Gwynn post-operatively?
Post-op Management

- Post-operatively Mr. Gwynn is treated with antibiotics, IV hydration, and morphine for pain
- On POD #1 he starts Sitz bathes 4 times a day - these consist of simply sitting in warm water tubs to bathe the abscess wound. These also help with the pain
- He is afebrile and tolerating full diet and is discharged home on POD #2
- Mr. Gwynn is given instructions to continue the Sitz baths at home
- On POD #7 the drain is removed in the office
Follow-up

• Mr. Gwynn returns to you in 2 months complaining of swelling, pain and intermittent purulent drainage from the former abscess site

• On exam you find the following …
Follow-up, continued

External opening of the anal fistula is the remainder of the excision made earlier

- Mr. Gwynn’s treated abscess has progressed to become an anal fistula (or *fistula in ano*)
- What do you do now?
Mr. Gwynn, continued

• During an examination under anesthesia (EUA) the external opening of Mr. Gwynn’s fistula is injected with hydrogen peroxide to determine the tract’s course. A probe is then inserted through the tract to mark its place.

• The tract is superficial and includes only a small portion of the internal and external sphincters. A fistulotomy is performed.

• Mr. Gwynn is discharged home from the recovery room after surgery. With continued Sitz bathes, the opened tract heals well and he is currently abscess and fistula free. He maintains full continence.
Discussion

• Anorectal abscesses result from obstruction of anal crypts and subsequent bacterial overgrowth and infection of the anal glands

• Commonly caused by S. aureus, gram negatives, and anerobes

• The collection of infected fluid enlarges and spreads into one (or more) planes …
Normal Anal Anatomy (coronal section)

- Anal column
- Supralevator space
- Rectum
- Levator ani
- Ischiorectal fat
- Anal canal
- Anal crypt
- Internal sphincter
- External sphincter
- Anal glands
Anatomic Classification of Abscesses

- 4 abscess locations (diagram to follow):
  - **Perianal** – between internal and external sphincters, spreading inferiorly towards the skin
  - **Intersphincteric** – remaining between the sphincters
  - **Ischiorectal** – advancing through the external sphincter into the ischiorectal fat
  - **Supralevator** – extending between the sphincters, superiorly above the levator ani
Abscess Anatomy

- Supralevator abscess
- External sphincter
- Ischiorectal abscess
- Internal sphincter
- Perianal abscess
- Intersphincteric abscess
Anorectal Abscess, discussion

• Presentation
  • Continuous rectal pain exacerbated by increased abdominal pressure, walking and/or sitting. Often with bloody bowel movements.
  • Occasionally: fever, urinary retention, pelvic sepsis

• Diagnosis
  • History and Physical - tender, erythematous mass
  • Confirmed by needle aspiration
  • Abscess anatomy defined by exploration (with or without anesthesia)
  • CT, MRI, or anal ultrasound in complicated cases
  • Colonoscopy to rule out IBD and malignancy
  • 10% of Crohn’s patients first present with perianal disease!
Discussion, continued

• **Treatment**
  
  • Antibiotics alone will lead to treatment failure
  
  • Prompt incision and exploration required (must identify suprarelevator disease and fistulas)
  
  • Surgical emergency in IBD, diabetic or immunocompromised patients
  
  • Biopsy if suspicious for cancer or IBD
  
  • Post-op drainage (by opening and drain placement)
  
  • Post-op antibiotics
  
  • Prognosis for avoiding systemic infection is excellent once drained but ~50% progress to chronic fistula in ano
Fistula in Ano

- 50% of surgically treated abscesses progress to become anal fistulas
- These fistulas consist of an abnormal communication between the anal canal and perianal skin. In this case it would be along the path of the original abscess tract.
- Fistulas present with symptoms of pain and swelling similar to abscesses but often also produce a discharge of pus or bloody drainage from their external openings
The fistula tracts will follow the course of the original abscess cavities and subsequent external drainage.
Treatment of Anal Fistulas

• Surgery is the only definitive treatment for anal fistulas
• The traditional operation, a fistulotomy, consists of cutting down to, and opening, the fistula tract
• Depending on the depth of the tract, a portion of the external sphincter may need to be transected. This can lead to incontinence and the potential risks of any operation must be weighed against its benefit
• In select cases, other options, such as mucosal advancement flap or chronic Seton placement, may be indicated.
• Newer treatments, such as absorbable fistula plugs made from porcine mucosa, simply “plug” up the tract of the fistula and in select cases may heal deeper fistulas without the need for a fistulotomy
References

- Photographs courtesy of Dr. Randolph Steinhagen
- Illustrations by Ezra Teitelbaum
Acknowledgment

The preceding educational materials were made available through the ASSOCIATION FOR SURGICAL EDUCATION

In order to improve our educational materials we welcome your comments/suggestions at:

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