CASE SIX

Short case number: 3_8_6
Category: Gastrointestinal & Hepatobiliary Systems
Discipline: Surgery
Setting: General Practice
Topic: Perianal abscess and fistula

Case

Martin Robinson, aged 45 years, presents with acute perianal pain and complains of a mass near his anus. He complains of feeling hot and sweaty and has difficulty sitting down. He has not been able to drive his truck all week because of the pain and is losing income. He has taken a course of antibiotics, called "Amoxyl" that he had lying around at home but it has not helped.

Questions

1. What further history and examination would you undertake?
2. On examination a tender, fluctuant mass is identified adjacent to the anus and you diagnose a perianal abscess. How do most anorectal abscesses start and how are they classified?
3. Outline the treatment of perianal abscesses.
4. What is a fistula-in-ano and how do they present clinically?
5. What is Goodstaff's rule and how does it help surgeons?
6. What are the principles of treatment of a fistula?

Suggested reading:

1. Henry MM, Thompson JN, editors. Clinical Surgery. 3rd edition. Edinburgh: Saunders; 2012. Chapter 25.
2. Garden OJ, Bradbury AW, Forsythe JLR, Parks RW, editors. Davidson's Principles and Practice of Surgery. 6th edition. Philadelphia: Churchill Livingstone Elsevier; 2012. Chapter 17.

ANSWERS

1. **What further history and examination would you undertake?**
   - complete GIT history
   - thorough GIT examination
   - visual & digital rectal examination
   - proctoscopy
   - cardinal signs of infection (pain, fever, redness, swelling, loss of function) are usually present

2. **On examination a tender, fluctuant mass is identified adjacent to the anus and you diagnose a perianal abscess. How do most anorectal abscesses start and how are they classified?**
   - most anorectal abscesses are believed to start with obstruction of the perianal glands that are located between the internal & external sphincters (intersphincteric space)
   - perianal glands normally discharge their secretions at the level of the anal crypts that are located at the base of the columns of Morgagni – 'cryptoglandular' origin
   - as the early intersphincteric abscess increases in size, it tends to spread along the planes of lesser resistance and to manifest itself fully as a perianal abscess
   - it may also manifest itself as an ischiorectal abscess in the ischiorectal fossa, located outside the external sphincter mechanism and below the level of the levator ani muscle
   - if the infection spreads above the levators (rare), the resultant supralevator abscess may be very difficult to diagnose clinically.
   - perianal & ischiorectal abscesses are the most common and account for 90% of perirectal abscesses
   - except for early intersphincteric abscesses and supralevator abscesses, perianal pain & swelling are readily apparent in perirectal abscesses
   - spontaneous drainage of pus may occur

3. **Outline the treatment of perianal abscesses.**
   - thorough & complete drainage of the abscess
   - failure to do this will likely result in ongoing pain, sepsis and overall treatment failure
   - drainage usually requires general anaesthesia and surgical incision
   - antibiotics alone have no role in the primary treatment of an abscess
   - however ABIC's may be used in conjunction with surgical incision & drainage – especially patients who are immune-compromised, those with diabetes, leukaemia, HIV/AIDS, and those undergoing chemotherapy

4. **What is a fistula-in-ano?**
   - after drainage of a perirectal abscess, the patient has a 50% chance of having a chronic fistula-in-ano
   - an anorectal fistula is an abnormal communication between the anus at the level of the dentate line and the perirectal skin, through the bed of the previous abscess
   - fistulae are named in relation to the sphincteric mechanism
   - intersphincteric fistulae are the result of perianal abscesses ; transphincteric fistulae are the result of ischiorectal abscesses; suprasphincteric fistulae are the result of supralevator abscesses

- extrasphincteric fistulae bypass the anal canal and the sphincteric mechanism and open high up in the rectum
  clinical presentation
- fistulae manifest as chronic drainage of pus and sometimes stool from the skin opening
- they rarely (if ever) heal spontaneously
- therefore surgical correction is usually indicated to eliminate symptoms

5. What is Goodstaff's rule and how does it help surgeons?

- helps the examiner to predict the trajectory of the fistulous tract and the probable location of the internal anal opening
- with the patient in the lithotomy (or knee–chest) position, an imaginary line is drawn at the level of the anus, parallel to the floor
- for external openings located anterior to this line, the fistula tract usually goes radially straight into the anal crypt
- for external openings located posterior to this imaginary line, the fistula tract generally curves around, and the internal opening is in a frank midline position
- however the greater the distance between the anus and the external opening, the less reliable and helpful Goodsall's rule becomes
- the trajectory of complex anal fistulae is unpredictable

6. What are the principles of treatment of a fistula?

- fistulotomy consists of 'unroofing' the fistula tract, allowing the fistula to heal slowly by secondary intention
- preliminary identification of the fistula tract by gentle insertion of a probe into the external skin opening, through the tract, until the internal anal opening is found
- allows intra-operative evaluation of the structures that need division
- staged fistulotomy with a Seton suture/nylon sling permits immediate division of all non-sphincteric structures and partial fistulotomy if appropriate
- judgement must be exercised to avoid cutting a large portion of the sphincter muscle which may lead to incontinence
- newer techniques include use of Fibrin glue, as well as rectal advancement flaps to cover internal opening
- recurrence and/or minor incontinence can be seen with more complex fistulae.