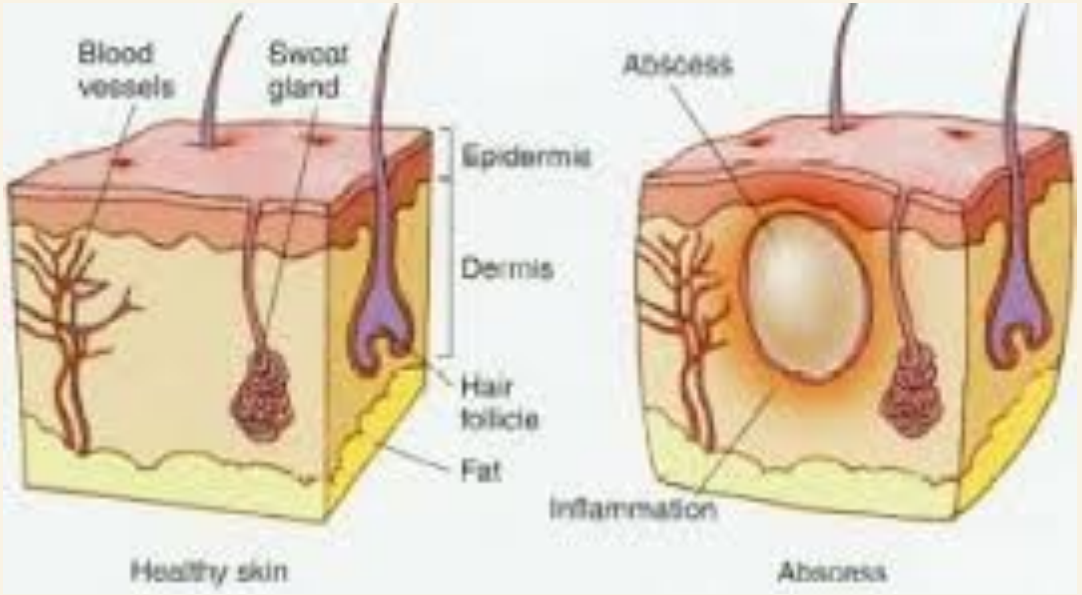
INCISION & DRAINAGE

"SPILL IT AND FILL IT"

ADVANCED PRACTICE PREP LLC

WHAT REALLY IS AN ABSCESS?

- "A localized infection characterized by a collection of pus surrounded by inflamed tissue".
  - Pfenninger and Fowler, 2011, p. 147



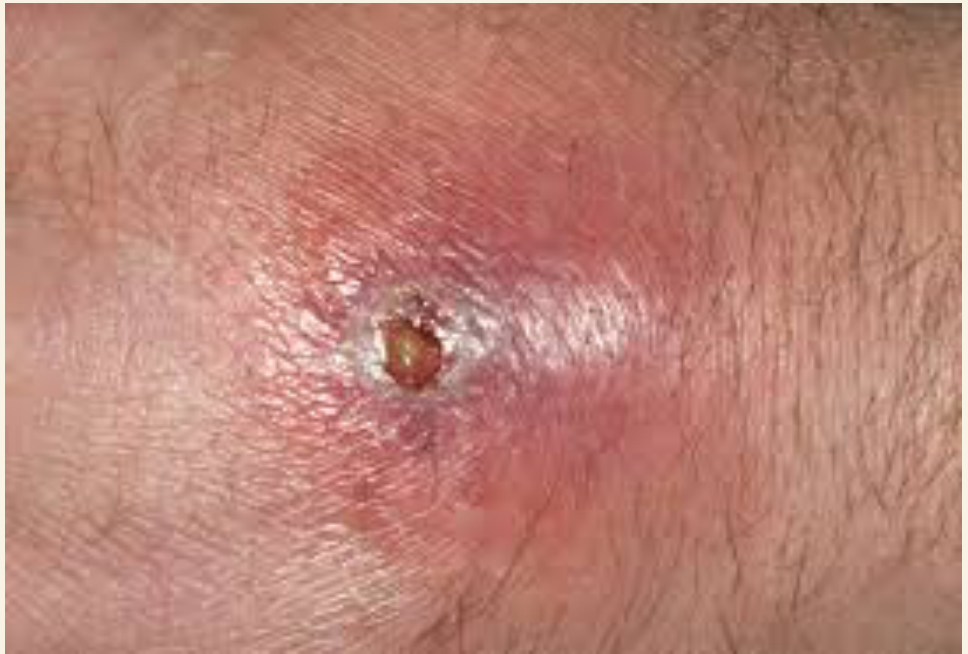
OTHER NAMES FOR ABSCESSES

- Furuncle or Boil: Abscess of a sweat gland or hair follicle.
- Carbuncle: Red, swollen cluster of boils or hair follicles.
- Paronychia: Abscess involving a fingernail or toenail.
- Felon: Abscess of tuft of soft tissue in distal phalanx.
- Hordeolum: Abscess of eyelid margin.
- Chalazion: Chronic inflammation of eyelid (in Meibomian glands).
- Pilonidal abscess
- Hidradenitis Suppurativa

- Pfenninger & Fowler

CLINICAL PRESENTATION

- Painful, fluctuant, pus-filled cutaneous lesion with or without cellulitis

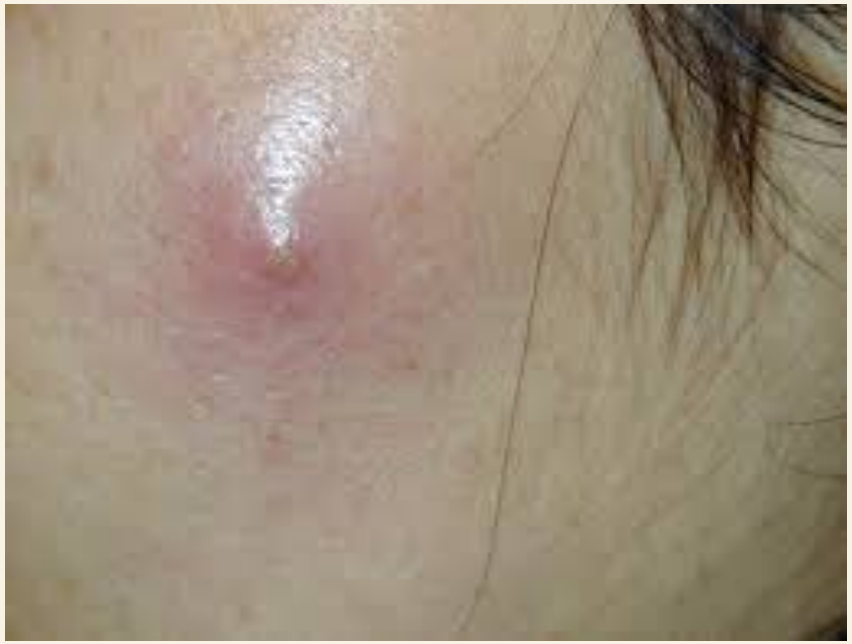


INCIDENCE OF E.D. VISITS FOR ABSCESSES

- Approximately 2% of Emergency Department visits are for evaluation of some type of abscess.
  - Kronfol, R. & Downey, K.A.

WHERE DO ABSCESSES OCCUR?

- Can occur anywhere on the body.
  - Most common sites are:
    - Buttocks
    - Breasts
    - Hair follicles
    - Extremities



- Pfenninger & Fowler

TREATMENT OF CHOICE

- Incision and Drainage (with or without antibiotics).
- If small, may consider warm compresses and/or antibiotics and let them drain spontaneously.

Pfenninger & Fowler

MICROORGANISMS

- Usually caused by staphylococcus aureus.
- Sometimes due to streptococcal species.
- May be a combination of microorganisms.
  - Pfenninger & Fowler




ANTIBIOTICS

- With the exception of purulent cellulitis, antibiotics are deemphasized

ANTIBACTERIALS ARE RECOMMENDED FOR

- Advanced age
- Previously failed I&D
- Severe local disease
- Systemic signs/symptoms
- Difficult to drain areas
  (eg: face)
- Septic phlebitis
- History/Risk of MRSA
- Immunocompromised
  - DM
  - HIV
  - Neoplastic disease

Forcade, et al., (2012)

JUST REMEMBER TO BE CAREFUL IN…

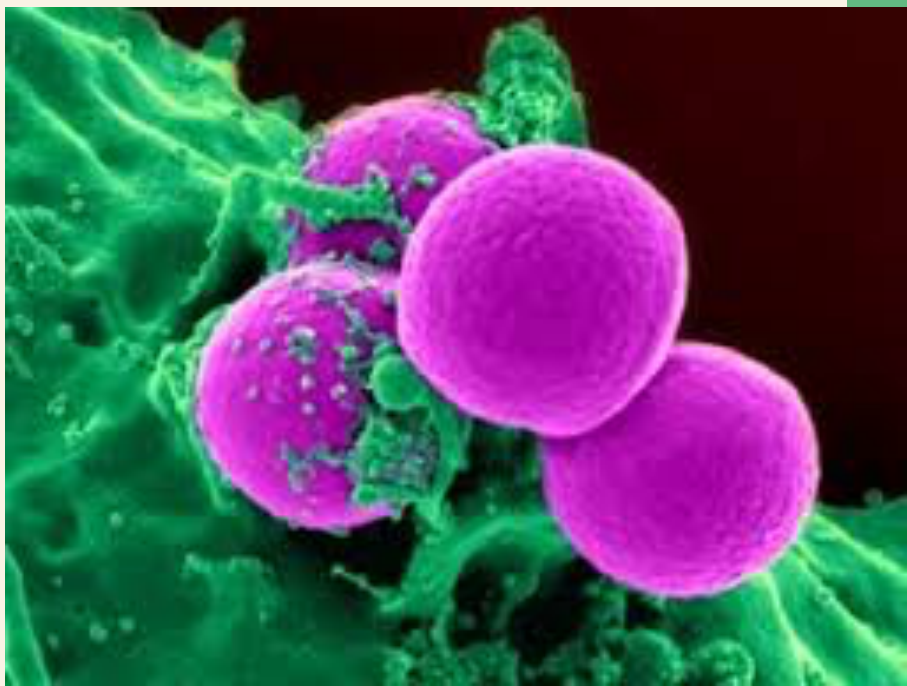
- Immunocompromised individuals
  - Such as:
    - Diabetics
    - Certain chronic diseases
    - Decreased immunity

    (May consider c and s as you may want to use antibiotics in these individuals).

Pfenninger & Fowler

IF THE ABSCESS RECURS…

- Consider MRSA!
- Trimethoprim-sulfamethoxazole
  - Higher clinical cure rate
  - ↓ rate of subsequent drainage



Talan, et al.,(2016)

AN IMPORTANT POINT!

- Breast abscesses are uncommon in the non-lactating woman (except in the subareolar area). SO…these should not be drained but rather biopsied!
  - Pfenninger & Fowler

CONTRAINDICATIONS

- In the triangle involving the bridge of the nose and corners of the mouth.
  - Increased risk of phlebitis which can extend into the intracranial area.

  If large, tender, and fluctuant (even in this area), it is okay to drain them but need antibiotics.

Pfenninger & Fowler

EQUIPMENT NEEDED

- Protective equipment (gloves, sterile gloves, mask).
- Lidocaine 1-2%
- May use ethyl chloride (not mandatory)
- Povidone iodine or chlorhexidine; alcohol
- 4 x 4 gauze
- #11 scalpel
- Curved hemostats
- Iodoform gauze (1/4”-1/2”)
- Culture swab
- Scissors
- Dressing

- Pfenninger & Fowler

STEPS OF THE PROCEDURE

- Clean area
- Perform a field block (try not to inject into the abscess cavity).
- Make a wide incision with #11 scalpel (if small can use 18 g needle). Preferably, incise in the direction of skin lines.
- Obtain a culture of the pus that is in the cavity.
    - Pfenninger & Fowler

STEPS OF THE PROCEDURE CONTINUED

- Apply external pressure to express as much pus as possible. May need to press from several angles.
- Pack with iodoform gauze. Remember this is STERILE gauze so maintain sterile technique. Leave a tail and put ointment over the tail so it does not stick to the area.
- Use a sterile dressing for drainage. (Dressing should be changed several times a day).
    - Pfenninger & Fowler

HEALING PROCESS

- Used to be routine to repack on a daily basis but recent evidence suggests it can be changed every 5-7 days. The other possibility is to remove an inch or so at a time when the individual comes back.
- The point is for it to heal from the INSIDE OUT!
  - Pfenninger & Fowler

COMPLICATIONS

- Packing too tight
- Recurrence/failure to resolve
- Scarring
- Fistula
- Osteomyelitis

- Pfenninger & Fowler

ADDITIONAL COMPLICATION AND METHOD TO ADDRESS

- One complication, as discussed, is recurrence. A way to decrease the risk of recurrence is to remove the cyst wall. This can be accomplished through
  - Complete excision
  - Minimal excision technique
  - Placement of two iodine crystals into the cyst.
    - Zuber, T.J. (2002)

COMPLETE EXCISION

- Completely removes sac.
- Time consuming.
- Requires sutures.

– Zuber, T.J. (2002)

MINIMAL EXCISION TECHNIQUE

- More difficult to remove sac.
- Incision is smaller.
- Requires minimal suturing.
  - Zuber, T.J. (2002)

IODINE CRYSTAL TECHNIQUE

- Simple and inexpensive.
- Can not be done if allergy to iodine.
- Takes longer to resolve cyst and requires follow up visit.

- Zuber, T.J. (2002)

INCISION AND LOOP DRAINAGE

- Better tolerated by patients
- More patient involvement in self-care
- Better cosmesis
- More cost-effective

INCISION AND LOOP DRAINAGE PROCEDURE

- Cleanse and drape the skin in normal fashion
- Inject with lidocaine (1%)
- Initially make an incision (about 0.5 cm) at one end of the abscess
- Introduce a hemostat to break up loculations
- Insert hemostat into the wound and tent the skin opposite initial incision
- Make another incision on this opposite side
- Irrigate the wound with sterile solution
- Grasp the vessel loop tie with the open hemostat on opposite side and pull out first
- Loosely hand-tie and dress
- Remove 7-10 days after placement

Ladde, Baker, Rodgers, & Papa, 2014

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