Initial Evaluation

☐ Is this an Abscess?

An abscess is a tender, swollen erythematous nodule with a palpable area of fluctuance.

Use ultrasound to distinguish hypodense collection of abscess from coagulopathy of cellulitis.

Use Doppler to ensure the collection is identiﬁed and not vascular and to locate surrounding vascular structures.

The ultrasound result is not available or results are equivocal, consider needle aspiration to conﬁrm diagnosis [1].

Vascular malformation: history of vascular repair, location near major vessels, exam may demonstrate bruit or thrill. Have a low threshold to use Doppler sonography; IOD of AVF is dangerous.

Herpetiform whitlow: severe localized lesion, onset on hands, often with history of HSV (oral or genital)

Kerion: boggy, elevated scalp abscess in context of food infection.

Hidradenitis suppurativa: recurrent groin, buttock or axilla furuncles/abscesses—does not curative and often requires surgical intervention.

Mycetoma: slowly enlarging, lesion, recent travel to tropics, isolation of infection under skin

ECT: granuloma inguinale, chancroid, lymphogranuloma venereum if suggestive location and history

Sporothrix: slowly progressive, painful ulcerative lesion in plant handlers / agriculture workers

Procedure

Infomred Consent

Expected Beneﬁts: resolution of infection, prevention of worsening infection, relief of pain

Possible Risks: pain, failure of the procedure requiring repeat procedure, bleeding, scarring, failure of antibiotics

Alternatives: antibiotics, warm soaks, observation

Analgesia

Oral or parenteral analgesia/analgesics prior to beginning procedure

Equipment

• gloves
• drapes and gowns
• drapes and gauze
• syringes and needles (25-30 gauge)
• forceps
• curved hemostat or cotton swab
• syringes
• loupes
• tongs

Prophylactic Antibiotics? (for transient bacteremia caused by I&D)

Indicated in these patients [4]

▫ Anticoagulation
▫ Prosthetic valve
▫ Reenlarging infected valve
▫ Intravascular device
▫ Intravascular device; toxic dose is 2.5 mg/kg without epinephrine, 3.5 mg/kg with epinephrine

Mildase without epinephrine: toxic dose is 4 mg/kg = 0.4 cc/kg of 1% solution, 0.2 cc/kg of 2% solution

Lidocaine with epinephrine: toxic dose is 7 mg/kg = 0.7 cc/kg of 1% solution, 0.35 cc/kg of 2% solution

Anesthetize Abscess

Endo-rectal method in this context

If possible

Abscess I&D of AVM is dangerous

I&D of AVM is not a sterile procedure but field is customarily sterilized

Incision

Make a linear rather than crural or elliptical incision

Minimizes scar with incision parallel to skin tension lines

On or the side of larger incision, especially in areas of less cosmetic importance

Wound Culture? indicated in these circumstances [8]

▫ Extensive/chronic disease
▫ Rapid progression in the presence of culture
▫ Signs of bacteremia or septic symptoms
▫ Immunocompromise, extremes of age, or signiﬁcant comorbidities, including diabetes

Break up loculations

Tissue adequate anesthetic injection is as needed as permitted to this key step, which reduces likelihood of abscess recurrence [10]

Use hemostat (or for smaller abscess, cotton swab) - using finger is discouraged as foreign body in abscess can rarely be excluded

Data is inconclusive but most cases it is likely that irrigation is unnecessary [7]

Debridement

Indicated in these patients [9]

▫ MRSA decolonization not routinely recommended [8,10]
▫ Cardiac transplant recipients who develop cardiac valvulopathy
▫ Prosthetic cardiac valve or prosthetic material used for cardiac valve repair
▫ History of infective endocarditis
▫ Bacteremia or septic phlebitis
▫ Extensive/severe disease

Abscess I&D is not a sterile procedure but field is customarily sterilized

Curative Antibiotics? indications are same as wound culture, above [9]

▫ Antibiotic choice - to be given 30-40 minutes before I&D
▫ Antibiotic spectrum should include MRSA
▫ IV broad spectrum abx + vancomycin or linezolid
▫ Clindamycin (600 mg, 20 mg/kg)
▫ Cefazolin or ceftriaxone (1 g, 50 mg/kg)
▫ E可怕xil (2 g, 50 mg/kg)
▫ PO/IV PCN allergy
▫ PO/IV PCN allergy
▫ Clindamycin (600 mg, 20 mg/kg)
▫ PO clindamycin, or ceftriaxone, or clindamycin

Update tetanus pnr

• Antibiotic spectrum should include MRSA
• Tailor antibiotic to culture/sensitivity if available
• Use cultures to cover str.uster uus normally not resistant [11]
• MRSA desensitization not routinely recommended [8,11]

Duration of 7 days unless speciﬁc concern

PVN: not cover for strep usually not necessary [11]

Clindamycin 300 mg TID × 7 TID mg

Duration of 10 days if 1 cm size abscess

IV clindamycin (600 mg BID 10 mg/kg TID)

If admitted: IV clindamycin (600 mg BID 10 mg/kg TID) + vancomycin or linezolid

Prophylactic Antibiotics? indications are same as wound culture, above [10]

References of immunoprophylaxis

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Emergency Department Incision & Drainage Checklist

Procedure (cont.)

Anesthesia

Field/regional block is possible

Abscess anesthetize itself by puncturing at one site within the dome, then injecting at separate site within dome - allows easy to drain through fistulae puncture site (can be collected for culture bar)

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