

DST-709 Localized Abscess and Furuncle: Adult

DEFINITION

- An abscess is a collection of pus in subcutaneous tissues
- A furuncle or boil is an acute, tender perifollicular inflammatory nodule or abscess
- A carbuncle is a deep-seated abscess, formed by a cluster of furuncles, generally larger and deeper

POTENTIAL CAUSES

- Infection with *Staphylococcus aureus* (25-50% of cases), anaerobes, other microorganisms
- In B.C., Methacillin Resistant Staphylococcus Aureus (MRSA) comprises over 25% of *Staphylococcus Aureus* infections

PREDISPOSING FACTORS

- Diabetes mellitus
- Immunocompromised or use of systemic steroids
- Previous skin colonisation of client or family with MRSA
- Cellulitis
- Seborrhea
- Trauma such as surgery, cuts, burns, insect or animal bites, slivers, injection drug use, plucking hair
- Excessive friction or perspiration
- Obesity
- Poor hygiene

TYPICAL FINDINGS OF LOCALIZED ABSCESS

History

- Possibly known MRSA positive (client and household members)
- Possible history of injury or trauma
- Local redness, progressing to deep red, swelling, pain, tenderness
- Fever usually absent unless systemic infection
- If opened, purulent, sanguineous material drains
- Folliculitis and carbuncles:
 - Usually found on the neck, axilla, breasts, face and buttocks
 - Begins as a small nodule, quickly becomes a large pustule 5-30 mm diameter
 - May occur singly (folliculitis) or in groups (carbuncles)
 - May be recurrent

Physical Assessment

- Localized area of erythema, swelling, warmth and tenderness
- Lesions often indurated and may be fluctuant (may be difficult to palpate if abscess is deep)
- Lesion may spontaneously drain purulent discharge
- Size of abscess often difficult to estimate; abscess usually larger than suspected
- Carbuncle may be present as a red mass with multiple draining sinuses in area of thick, inelastic tissue (i.e., posterior neck, back, thigh)
- Regional lymph nodes usually **not** tender or enlarged. If enlarged and tender consider increased risk for systemic infection
- Fever, chills and systemic toxicity are unusual.

If client appears toxic, consider the potential for bacteremia and a systemic infection

Diagnostic Tests

- Swab discharge for Culture and Sensitivity (C&S)
- Determine blood glucose level if infection is recurrent or if symptoms suggestive of diabetes mellitus are present

MANAGEMENT AND INTERVENTIONS

For simple, localized abscesses and furuncles that are not ready for lancing, appropriate treatment includes the application of warmth, cleaning and protecting the abscess.

Goals of Treatment

- Resolve infection
- Prevent complications

Non-pharmacologic Interventions

Small, localized abscess / furuncles / carbuncles

- Apply warm saline compresses to area at least qid for 15 minutes (this may lead to resolution or spontaneous drainage if the lesion or lesions are mild)
- Cover any open areas with a sterile dressing
- Once abscess become fluctuant, if it has not spontaneously begun to drain, lance and continue with heat to facilitate drainage. Do a C&S of drainage. Rest, elevate and gently splint infected limb

PHARMACOLOGIC INTERVENTIONS

- For pain or fever
 - Acetaminophen 325 mg 1-2 tabs po q 4-6 h prn
- OR**
- Ibuprofen 200 mg, 1-2 tabs po q 4-6 h prn

NOTE: Antibiotics are only recommended if one or more of the following are present;

- The abscess is more than 5 cm,
- There are multiple lesions,
- There is surrounding cellulitis,
- It is located in the central area of the face,
- It is peri-rectal,
- There are systemic signs of infection,
- The client is immunocompromised,
- The client is known to be MRSA positive.

ANTIBIOTICS

First line if MRSA is not suspected:

- Cloxacillin 500 mg po qid for 5-7 days
- OR**
- Cephalexin 500 mg po qid for 5-7 days

If allergic to penicillin and cephalosporins, if MRSA positive, or a known MRSA positive diagnosis in the past or in the household

- doxycycline 100 mg po BID for 5-7 days

OR

- trimethoprim 160 mg / sulfamethoxazole 800 mg (DS) 1 tab po bid for 5-7 days

Pregnant or Breastfeeding Women:

Acetaminophen, cloxacillin, and cephalosporins may be used as listed above.

DO NOT USE ibuprofen, trimethoprim 160 mg / sulphamethoxazole 800 mg or doxycycline

Potential Complications

- Cellulitis
- Necrotising fasciitis
- Sepsis
- Scarring
- Spread of infection (e.g., lymphangitis, lymphadenitis, endocarditis)
- Recurrence

Client Education/Discharge Information

- Instruct client to keep dressing area clean and dry
- Recommend that client avoid picking or squeezing the lesions
- Return to clinic at any sign of cellulitis or general feeling of illness
- Counsel client about appropriate use of medications (dose, frequency)
- Stress importance of regular skin cleansing to prevent future infection (in clients with recurrent disease, bathe the area bid with a mild antiseptic soap to help prevent recurrences)
- Do not use public hot tubs or swimming pools

Monitoring and Follow-Up

- Follow up daily until infection begins to resolve
- Instruct client to return immediately for reassessment if lesion becomes fluctuant, if pain increases or if fever develops.

Consultation and/or Referral

Consult with a physician or nurse practitioner promptly for potential intravenous (IV) therapy if:

- Client is febrile or appears acutely ill
- Extensive abscesses, cellulitis, lymphangitis or adenopathy are present
- An abscess is suspected or detected in a critical region (i.e., head or neck, hands, feet, perirectal area, over a joint)
- Immunocompromised client (i.e., diabetic)
- Infection recurs or does not respond to treatment

DOCUMENTATION

As per agency policy

REFERENCES

More recent editions of any of the items in the Reference List may have been published since this DST was published. If you have a newer version, please use it.

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