**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 cephalaxin, 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 cephalaxin may be used as listed above.

**DO NOT USE ibuprofen, trimethoprim 160 mg / sulphonmethoxazole 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.


