

## DEFINITION

An inflammatory condition of the breast, possibly accompanied by infection and usually associated with lactation. Can be seen in non-lactating clients.

## IMMEDIATE CONSULTATION REQUIRED IN THE FOLLOWING SITUATIONS

- Any client who appears acutely ill, with fever and malaise.
- Signs and symptoms of sepsis (e.g., fever, tachycardia, hypotension, tachypnea, altered mental status).
- If there is even the slightest suspicion of a breast abscess, this is a surgical emergency that requires immediate incision and drainage.

## CAUSES

- The majority of cases occur in the first 6 weeks postpartum, but mastitis can occur at any time during lactation.
- Common condition in lactating women with incidence ranging from 3-20%.
- Bacterial pathogens are usually *Staphylococcus aureus*, occasionally Streptococcus.
- Breast abscesses are uncommon and occasionally caused by methicillin-resistant *Staphylococcus aureus* (MRSA).
- Refer to *Northern Saskatchewan guidelines (2014) for skin and soft tissue infections including suspect MRSA in the community setting*. (Population Health Unit, Northern Saskatchewan, 2014) (Appendix attached)

## PREDISPOSING AND RISK FACTORS

- Blocked nipple pore or duct
- Cracked nipple, especially if colonized with *Staphylococcus aureus*
  - Children with staphylococcal or streptococcal skin infections can be more prone to breast and other soft tissue infections.
- Yeast infection (thrush)
- Diabetes
- Illness in client or baby
- Improper nursing technique
- Inadequate breast hygiene
- Infrequent feedings or shortened duration of feedings
- Maternal stress and fatigue

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- Missed feedings
- Oversupply of milk, engorgement/stasis
- Past mastitis
- Poor latch, weak or uncoordinated suckling leading to inefficient removal of milk
- Cleft lip or palate
- Short frenulum in infant (tongue tie)
- Pressure on the breast (e.g., tight bra, car seatbelt)
- Rapid weaning
- Previous breast injuries (e.g., soft tissue injuries)

**HISTORY**

- The majority of cases occur in the first 6 weeks postpartum, but mastitis can occur at any time during lactation.
- Fever for < 24 hours.
- Nausea and/or vomiting in severe cases.
- Chills, influenza-like symptoms (muscle aches and pain).
- Engorged breast that is swollen, painful and shiny.
- Breast may be diffusely warm with red areas (red streaks may be present).
- The milk does not flow easily and infants have difficulty latching on to the breast due to engorgement and a stretched, flat nipple.

**PHYSICAL FINDINGS**

- Client in moderate distress, fatigued
- Wedge-shaped area of breast is tender, hot, and swollen
- Temperature of 38.5°C oral or greater may be present
- Rapid heart rate
- Nipples may be excoriated, cracked or caked with milk
- Area of induration (hardened)
- Breast pain
- Fluctuance may be detected (which may indicate an abscess)
- Axillary nodes enlarged and tender
- Malaise or myalgia

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**DIFFERENTIAL DIAGNOSIS**

- Breast engorgement
- Nipple sensitivity
- Galactocele
- Primary invasive breast cancer

**COMPLICATIONS**

- Breast abscess
- Cessation of breastfeeding because of pain, which may lead to further engorgement and stasis of milk in the breast
- Sepsis

**INVESTIGATIONS AND DIAGNOSTIC TESTS**

- Laboratory investigations and other diagnostic procedures, such as ultrasound, are not routinely needed for a clinical diagnosis.
- Breast milk culture and sensitivity should be performed when:
  - clients do not respond or are allergic to antibiotics.
  - the condition is hospital-acquired.
  - the condition recurs.
  - the condition is severe or unusual.

**MAKING THE DIAGNOSIS**

- There appears to be a continuum from engorgement to non-infective mastitis to infective mastitis and the diagnosis is usually made clinically.

**MANAGEMENT AND INTERVENTIONS**

**Goals of Treatment**

- Eradicate infection
- Prevent complications
- Prevent condition (through education about proper breast care)

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**Appropriate Consultation**

- Presentation consistent with those identified in the Immediate Consultation Required in the Following Situations section.
- Approximately 3% of clients with mastitis develop breast abscesses. Breast abscesses should be suspected if there is a well-defined area of breast that remains hard, red and tender despite appropriate management (Amir & The Academy of Breastfeeding Medicine Protocol Committee, 2014). Breast abscesses are frequently treated with incision and drainage.

**Non-Pharmacological Interventions**

- Rest, adequate fluids, and nutrition are important measures.
- Application of heat (shower or a hot pack) to the breast just prior to feeding may help with the letdown reflex and milk flow.
- After a feeding or after milk is expressed from the breasts, cold packs can be applied to the breast in order to reduce pain and edema.

**Pharmacological Interventions**

- An anti-inflammatory agent, such as ibuprofen, may be more effective in reducing the inflammatory symptoms than a simple analgesic like acetaminophen.
  - Adult
    - Ibuprofen 400 mg orally q6-8h to maximum dose of 1600 mg in 24 hours
  - Children
    - Ibuprofen (Motrin) 10 mg/kg/dose orally q6-8h (maximum dose 40 mg/kg/day)
- Antibiotics should be initiated if there is no improvement after 12-24 hours of conservative treatment or if the woman is acutely ill.
- The choice of antibiotic should be based on the severity of the client presentation
  - Adult
    - Mild Disease
      - Cephalexin 500 mg orally q6h for 7-10 days
      - Or
      - Cloxacillin 500 mg orally q6h for 7-10 days

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- Mild Disease (beta lactam allergy/MRSA)
  - Clindamycin 300 mg orally q6h for 10 days
  - Sulfamethoxazole/Trimethoprim (SMX/TMP) 400/80 mg 2 tabs orally q6h or 800/160 mg (DS) 1 tab orally q6h for 10 days
- Moderate/Severe Disease
  - Requires consultation/referral/hospitalization
- Children
  - Mild Disease
    - Cephalexin (Keflex) 50-100 mg/kg/day orally in divided doses q6h to a maximum dose of 500 mg q6h for 7-10 days
    - Or
    - Cloxacillin 50 mg/kg/day orally in divided doses q6h to maximum dose of 500 mg q6h for 7-10 days
  - Mild disease MRSA
    - Clindamycin 25-30 mg/kg/day orally in divided doses q6-8h to a maximum of 300 mg orally q6h for 7-10 days
    - Sulfamethoxazole/Trimethoprim (SMX/TMP) 8-12/mg/kg/day orally in divided doses q12h to a maximum of 400/80 mg 2 tabs orally q12h or 800/160 mg (DS) 1 tab orally q12h for 10 days
  - Moderate to Severe Disease
    - Requires consultation/referral/hospitalization

**Client and Caregiver Education**

- Counsel client/caregiver about the appropriate use of medications (dose, frequency, compliance, etc.).
- Because milk stasis is often the initiating factor in mastitis, clients must be educated on effective milk removal:
  - Clients should be encouraged to breastfeed more frequently, starting on the affected breast.
  - If pain interferes with the letdown reflex, feeding may begin on the unaffected breast, switching to the affected breast as soon as letdown is achieved.
  - Positioning the infant at the breast with the chin or nose pointing to the affected area will help drain the affected area.

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- Massaging the breast during the feed with an edible oil or nontoxic lubricant may facilitate milk removal. Massage should be from the blocked area to the nipple.
- After the feeding, expressing milk by hand or pump may augment milk drainage and hasten resolution of the problem.
- An alternate approach for a swollen breast is fluid mobilization, which promotes fluid drainage toward the axillary lymph nodes. This is achieved with the client in a recumbent position and achieved by stroking the skin surface of the affected area from the areola to the axilla.
- There is no evidence of risk to the healthy, term infant of continuing breastfeeding from a mother with mastitis.
- Clients who are unable to continue breastfeeding should express the milk from breast by hand or pump, as sudden cessation of breastfeeding leads to a greater risk of abscess development than continuing to feed.

**Monitoring and Follow-Up**

- If symptoms of mastitis are mild and have been present for < 24 hours, conservative management (effective milk removal and supportive measures) may be sufficient.
- If the symptoms do not resolve within several days of appropriate management, including antibiotics, a wider differential diagnosis must be considered. Referral to a physician is required. Investigations to confirm resistant bacteria, abscess formation, an underlying mass, or inflammatory or ductal carcinoma may be performed.
- More than two or three recurrences in the same location also require evaluation to rule out an underlying mass or other abnormality.

**Referral**

- Hospital admission should be considered for clients who are ill, require intravenous antibiotics, and/or do not have supportive care at home. Rooming-in of the infant with the client is mandatory so that breastfeeding can continue.

**DOCUMENTATION**

- As per employer policy

## REFERENCES

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RNs WITH ADDITIONAL AUTHORIZED PRACTICE  
CLINICAL DECISION TOOL  
DECEMBER 1, 2016

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Appendix

[MRSA Guidelines 2014](#)