Protocol #7 Mastitis



Protocol #7: Mastitis

Mastitis is an inflammatory condition of the mother's breast, which may or may not be accompanied by infection.

Observation and Assessment

Assess the mother for possible symptoms:

- Unilateral symptoms occur most often in the upper, outer quadrant but may occur anywhere, including under the axilla.
- Red, hot, swollen.
- Possible red streaks and/or shiny breasts.
- Intense pain.
- Flu-like symptoms, e.g., chills, aches, fatigue.
- Fever >38.4°C (>101°F).
- Possible sudden onset. (Source: Adapted from Lawrence, 2011.)

Possible Contributing Factors or Causes

Mastitis may be mother and/or baby related.

Assess the mother for:

- Inadequate drainage of her breasts.
- Stress and fatigue.
- Plugged ducts (Protocol #6: Plugged Ducts).
- Sore, cracked nipples (Protocol #4: Sore Nipples).
- Overabundant breast milk supply (*Protocol* #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Reflex).
- Engorgement and breast milk stasis (*Protocol #5: Engorgement*).
- External pressure on her breast, e.g., from a constrictive bra or clothing, straps on a baby carrier, mother's finger pressing on breast, always sleeping on the same side or always holding the baby the same way.

• Previous history of mastitis in multiparas. (Source: Adapted from Fetherston, 1998; Riordan, 2010.)

Assess the baby for:

- Ineffective attachment or suck (*Protocol #2: Positioning and Latching; Protocol #10: Ineffective Suck*).
- Infrequent, hurried, or shortened breastfeedings.
- Missed breastfeedings.
- Rapid weaning.

Suggestions

1. Assess for possible cause(s) of the mastitis (see previous section on Possible Contributing Factors or Causes).

- If the mother has plugged ducts, refer to *Protocol* #6: *Plugged Ducts*.
- If the mother has sore or cracked nipples, refer to *Protocol #4: Sore Nipples.*
- If the mother's breasts are engorged or have breast milk stasis, refer to *Protocol #5: Engorgement*.
- If the mother has an overabundant breast milk supply, refer to *Protocol #13: Overabundant Breast Milk Supply/Forceful Letdown or Breast Milk Ejection Reflex*

2. Provide the mother with suggestions for breastfeeding with mastitis.

Before breastfeeding, encourage the mother to:

- Continue breastfeeding and promote effective breast milk removal.
- Apply heat to the affected area for a few minutes. Moist or dry heat includes a warm shower or bath, a warm, moist towel or disposable diaper, a heating pad on low setting, a hot water bottle or immersing the breast in a bowl of warm water.
- Gently massage the affected area while applying heat to promote breast milk removal (i.e., drainage of that area).
- Apply moist heat and gentle nipple rolling if there is

a white blister or bleb at the end of the nipple. If the blister does not open after repeated breastfeedings or if it causes breastfeeding to be painful, then the blister may need to be opened with a sterile needle at a breastfeeding clinic or by a physician. This should provide nipple pain relief and may clear an underlying plugged duct.

• Apply heat to her back or shoulders for comfort and relaxation.

During breastfeeding, encourage the mother to:

- Offer the affected side first at each breastfeeding to ensure strong sucking and breast milk removal from that area.
- Try the unaffected side first for a short time if it is too painful to breastfeed on the affected side.
- Use a variety of breastfeeding positions to promote drainage of all the ducts in her breast. Try positions that have the baby's chin or nose pointing towards the affected area (ABM Protocol #4, 2008).
- Gently massage the affected area during the breastfeeding to promote breast milk removal from that area. Massage should be directed from the affected area towards the mother's nipple (ABM Protocol #4, 2008).
- Assess that the baby is correctly positioned and latched (*Protocol #2: Positioning and Latching*).
- Assess that the baby is sucking and swallowing long enough to effectively remove breast milk from the breast,

Between breastfeedings, encourage the mother to:

- Observe her baby for early feeding cues to be able to breastfeed early and frequently:
 - when the baby is showing feeding cues,
 e.g., rapid eye movements under the eyelids,
 sucking/licking, hands to mouth, increased
 body movements, and making small sounds
 (Protocol #1: The Initiation of Breastfeeding).
 - before the baby is overly hungry or crying.
 - when the breasts become uncomfortable or full, or at least 8 times in 24 hours, including overnight, until the breasts are no longer engorged.
- Wear a supportive and well-fitting bra.
- Avoid placing prolonged pressure on the breasts, e.g., from a tight or underwire bra, straps on a baby

carrier, always sleeping on one side, or always holding the baby the same way.

- Avoid wearing a bra to bed (Fetherston, 1998).
- Feed the baby only breast milk. Avoid supplementation unless medically indicated (*Protocol #17: Indications for Supplementation or Cessation of Breastfeeding*).
- Avoid pacifiers and bottles.
- Avoid missed or shortened breastfeedings. Express breast milk if breastfeedings are missed or shortened.
- Rest as much as possible and eat and drink according to *Eating Well With Canada's Food Guide* (Health Canada, 2007).
- Apply cold to reduce breast swelling if she wishes. Wrap a cold cloth or cold pack in a towel or cloth to avoid direct exposure to the skin.
- •Use analgesics as needed, e.g., acetaminophen, ibuprofen. To inquire about the use of acetylsalicylic acid, i.e. aspirin, consult with a breastfeeding expert or breastfeeding clinic.

If the baby is unable to latch or breastfeed effectively, encourage the mother to:

- Gently express each breast after each time that the baby is unable to breastfeed effectively. If breastfeeding is stopped for any length of time, the mother will need to express each breast at least 8 times in 24 hours, including overnight, until the mastitis has cleared. The mother should also express if her breasts become uncomfortable or overly full (*Protocol #19: Expressing and Storing Breast Milk*).
- Feed the baby with expressed breast milk using an alternative feeding method, e.g., cup, spoon, syringe, or finger feeding (*Protocol #18: Alternative Feeding Methods*). If expressed breast milk is not available, an appropriate supplement should be offered (*Protocol #17: Indications for Supplementation or Cessation of Breastfeeding*).
- Attend a breastfeeding clinic or see a breastfeeding expert for further assessment as soon as possible.

Antibiotic treatment:

• Mothers should be assessed without delay regarding the need for antibiotic treatment.

- Antibiotic treatment, e.g., cephalexin, cefaclor, cloxacillin, flucloxacillin, amoxicillin, clavulin acid, clindamycin, and ciprofloxacin is usually effective against Staphylococcus aureus. Clindamycin and ciprofloxacin are effective for mothers allergic to penicillin.
- Breastfeeding can and should continue together with any of the above antibiotics. Abrupt discontinuation of breastfeeding for any length of time without regular expression to effectively remove breast milk from the mother's breasts can lead to complications such as engorgement, plugged ducts, prolonged or recurrent mastitis, or an abscess.

General Principles

Frequent breastfeeding is found to be a protective factor against mastitis (Fetherston, 1998). Frequent breastfeeding is necessary to effectively remove breast milk from the alveoli and breast milk ducts, either by breastfeeding or expression.

Effective removal of breast milk from the mother's breast is essential to prevent breast milk stasis. A variety of terms may be used to describe this. Riordan uses the term "removal", as does Lauwers. The Academy of Breastfeeding Medicine uses both the terms "removal" and "drainage", as does the Cochrane Review (Crepinsek, 2010). Lawrence includes the terms "emptying" and 'drainage'. Biancuzzo also uses the terms "removal" and "emptying". Ultimately, to support infant growth and nutrition, the breast milk must be effectively removed from the mother's breast and transferred to the baby.

Mastitis is an acute inflammation or cellulitis of the interlobular connective tissue of the mother's breast, which may or may not be accompanied by infection (Foxman, 2002; WHO, 2000). Lactation mastitis is associated with breast milk stasis in the ducts or alveoli. It may also be associated with or result in infection. Some definitions of mastitis refer to infectious mastitis only (Mass, 2004). Mastitis may be viewed as a continuum, from non-infectious inflammation of the mother's breast to infection that may lead to breast abscess (Crepinsek, 2010).

Non-infectious mastitis can possibly be managed by breastfeeding strategies alone to promote effective removal of breast milk from the mother's breast.

Infectious mastitis is most frequently caused by

Staphylococcus aureus (Jahanfar, 2009; Osterman & Rahm, 2000) and less frequently Streptococcus or Escherichia coli (WHO, 2000). Although mastitis may be associated with Candida albicans that would likely be secondary to a bacterial infection, candidiasis is a fungal infection. Candidiasis may occur following antibiotic treatment for mastitis (*Protocol #15: Candidiasis (Thrush*)).

In addition to effective breast milk removal from the mother's breast, infectious mastitis may also need treatment with antibiotics. Antibiotics that are compatible for both the mother and baby are used whenever possible. A complete course of antibiotics is important to prevent recurrent mastitis (Osterman, 2000; Lawrence, 2011). Although the Cochrane Review did report a study that suggested more rapid symptom relief with antibiotics, its overall conclusion was that there is very little evidence of the effectiveness of antibiotic therapy, and there is an urgent need for high-quality double-blind randomized control trials (Jahanfar, 2009). An immediate referral to a primary health care provider is recommended. Delay may lead to prolonged or recurrent mastitis (Lawrence, 2011).

The composition of breast milk changes during a breast infection. There are cellular changes that increase the risk of vertical transmission of infection, particularly retroviruses (Michie et al., 2003). Anti-inflammatory components increase to protect the baby from mastitic milk (Buescher, 2001 in Riordan). The sodium content increases and the flavour may change. This may lead to a change in the baby's feeding behaviour.

- Mastitis commonly occurs in the first few weeks after birth; however, approximately a third of cases develop after six months.
- Mastitis presents a spectrum of symptoms (Barbosa-Cesnik, 2003), ranging from local inflammation, to systemic symptoms, to an abscess.
- Poorly managed mastitis may develop into an abscess. A small percentage of mothers with mastitis develop an abscess and will need to seek medical attention to remove the collection of pus.

Recurrent mastitis may be associated with breast cancer. Pregnancy associated breast cancer (PABC) occurs in a small percentage of women in the first year postpartum. It is important to refer the mother to her primary health care provider to evaluate for possible breast cancer if there is recurrent mastitis or a plugged duct in the same area, febrile mastitislike symptoms that are unresolved after antibiotic treatment, or a mass not decreasing after 72 hours of optimized breastfeeding management (Petok, 1995 in Lawrence, 2011). It is recommended that the breast be emptied prior to a diagnostic procedure (Lawrence, 2011).

• Continue breastfeeding.

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