Mastitis

Mastitis is an inflammatory condition of the breast that may or may not be accompanied by infection. Mastitis is a common preventable complication during breastfeeding and can often be self-managed. Initial onset usually occurs from 2 to 6 weeks postpartum, although it can occur at any stage during lactation. The incidence of mastitis ranges from 4 - 27 per cent. The risk of mastitis is higher in women who have a previous history of mastitis. While poorly functioning milk ducts, engorgement, non-infective mastitis, infective mastitis and breast abscesses are all separate entities, in many cases their pathology is a continuum, one leading to another. Women experience a drop in breast milk supply during mastitis. With good management the supply can be regained.

Non-infective mastitis

This occurs when there is ineffective drainage of milk from the breast. Small amounts of milk from the alveoli are forced into the surrounding breast tissue causing a localised inflammatory response that is thought to contribute to the flu-like symptoms. Milk stasis, and blockages, must be relieved or it can lead to the more serious infective mastitis. Some women may experience frequent blocked ducts, and if they are aware of the early signs and symptoms, may be able to avert mastitis requiring antibiotics. Thorough and frequent drainage of the breast is essential to avoid this

Infective mastitis

Cellulitis of the interlobular connective breast tissue is the most common form of mastitis. Pus is rarely found in the milk as the infection is outside of the ductal system. Adenitis is where the infection occurs within the ductal system. Clinical symptoms seem to be less severe than those of cellulitis. Pus may appear in the milk.

Nipple damage has been shown to result in an increased risk of infective mastitis. The most common organism causing infective mastitis is Staphylococcus aureus.

Symptoms

• Painful red, swollen, inflamed area of the breast

• Breast is hot to touch

• Fever > 38.5oC

• Flu-like symptoms (chills, headache, muscles aches)

Risks and precautions

Mis-management of mastitis may lead to a breast abscess or cessation of breastfeeding. Physical management of symptoms should be used first if appropriate.

Causes of mastitis:

- Maternal Nipple problems
- Poorly functioning (blocked) milk ducts
- Cracked or damaged nipples
- Inappropriate use of nipple shields Feeding problems

- Suboptimal positioning and attachment
- Missed feeds
- Oversupply of milk
- Insufficient milk removal and engorgement Maternal health
- Fatigue and stress
- Poor health, anaemia, malnutrition, infections elsewhere
- Breast trauma
- Tight bra, restrictive clothing

Baby

- Tongue tie in the infant causing inefficient milk removal and nipple trauma
- Pacifier or teat use
- Inefficient suck technique

Mastitis management:

Inflammatory mastitis

Inflammatory mastitis is not yet infected so should be treated conservatively with meticulous breastfeeding technique. Not all mastitis requires antibiotics immediately. Women with inflammatory mastitis will require timely support to prevent infection developing and can remain at home at this stage, with good support. If after 12 - 24 hours these self-help techniques have not helped, or the symptoms are severe or worsening then the woman should seek urgent medical advice and antibiotics initiated.

• Good hand washing technique

• Breast examination to identify the nature of any lumps/masses. Any lumps suspicious of breast abscess (i.e. not reducing in size and softening with breast emptying, fluctuant) indicate the need for a medical review +/- ultrasound scan

• Take a full breastfeeding history, covering frequency of feeds, whether demand feeding, whether using one or both breasts, pain and breast damage.

• Identify possible causes of mastitis and give advice to mitigate them

• Continue breastfeeding. Frequent effective milk removal is required to treat mastitis and prevent complications such as breast abscesses or recurrent mastitis. The most reliable method of milk removal is usually effective feeding by the baby. If feeding is not possible or not sufficient to ensure good breast emptying the woman should express milk from the affected breast by hand or by pump or both. Hand expression is often more effective although more laborious for the woman. The breast may not feel 'soft' after expressing, due to inflammation rather than just milk stasis. If the breast is very oedematous, the oedema may be pressed back towards the sternum and axilla using gentle hand pressure "reverse pressure softening" (see Cotterman 2004)

• Ensure there is no pressure on breast from bra or hands when feeding

• Before feeding and expressing, stimulate the oxytocin reflex with gentle massage over the inflamed area. Milk let down may be enhanced by the use of heat (wheat pack, shower, bowl of water), Observe positioning and attachment technique, and improve if necessary. It may help drain the inflamed area more efficiently to position the baby so that the chin is pointing towards the affected area eg. switch to rugby hold for a few feeds a day if you usually cross cradle feed.

• Feeding from the affected side first may be more efficient at emptying the breast. However, starting a let-down before latching the baby may be more comfortable for the woman • Alternate warmth and cold. Warmth before and during feeding to help let down and comfort, cold after feed to help reduce swelling and inflammation.

• Encourage the mother to rest, stay in bed and feed baby frequently

• Frequent fluid intake and nutritious snacks (at least 6-8 glasses of water a day)

• Live yoghurt or Vitamin C or E tablets may be taken

• Check or ask the woman to check her temperature 4 hourly

• Anti-inflammatory analgesia regularly to reduce inflammation and aid breast emptying

Probiotics

There is some evidence that the use of a probiotic which contains Lactobacillus Salivarius or Lactobacillus fermentum may be an effective treatment for mastitis (Jiménez et al 2008) This may be started at the onset of symptoms, alongside good breastfeeding technique physical management. It may be taken alongside antibiotic treatments, should they become necessary. It has been suggested that these probiotics may also be taken prophylactically in the case of recurrent mastitis. Commercially available preparations of probiotic containing Lactobacillus salivarius that can be purchased by the woman from retail pharmacies or health food stores are:

• Nutralife Probiotic 50 Billion (preferred)

• Lifestream BowelBiotics + Advanced Probiotics

Infected mastitis

Infected mastitis first requires treatment of the underlying cause of milk stasis and identification of the pathogen (see recommendations above). Probiotics should be commenced at the onset of symptoms. Should these prove ineffective, or if the woman is acutely unwell, then antibiotics will be required to facilitate quick resolution and reduce the risk of recurrence.

Drug treatment

Pain management Prescribe regular analgesia:

• Paracetamol

• Non-steroidal anti-inflammatory drugs are useful to reduce inflammation and facilitate breast emptying

If there is no improvement or the woman continues to have symptoms such as:

• A temperature over 38.5°c

• Systemic symptoms such as chills, aches or pain

• Painful, reddened area on the breast, chills Then antibiotic treatment should be started. Antibiotic treatment

The baby may be unsettled due to both the mastitis and the antibiotics. Diarrhoea, rashes and Candida are common side effects in the baby. Staphylococcus aureus is the most common organism to cause mastitis. Failure to respond after 24 - 48 hours of antibiotic treatment should prompt review of therapy.

Occasionally it may be necessary to consider taking a breastmilk sample if the patient's clinical picture suggests further investigation i.e. has had recurrent mastitis or is not responding to treatment.

This should be considered on a case by case basis and not as routine general practice.

Candida Infection

Following treatment with antibiotics, a woman is at risk of Candida albicans (Thrush) on the nipples or in the baby's mouth.

How to recognise Candida

• Nipple and areola thrush presents with a red shiny appearance that is often itchy with sharp stabbing pain on feeding. The nipple should also be carefully observed to assess for white spots.

• White coating on the baby's tongue or white spots in the mouth which does not rub off

• Sore red nappy rash on the baby Management of topical Candida Treat both the woman and baby as Candida will pass back and forth between them. Women should:

• Wash hands frequently, especially after changing nappies • Hot wash and dry towels at home daily, or use paper towels

• Avoid soap on nipples

• Boil expressing equipment and feeding equipment for 20 minutes daily – cold water sterilizing is not effective against Candida

• Keep nipples dry and change breast pads frequently, as soon as they become damp

• Reduce sugary food intake

Options for treating Candida

Non-pharmaceutical

• 1 teaspoon of Sodium Bicarbonate in a cup of warm water to bathe the nipples

• 1 tablespoon of vinegar in a glass of water can have the same effect

• Natural live yoghurt contains bacteria, which act against Candida. Take orally and apply some to nipples

Pharmaceutical

Continue treatments for minimum 2 weeks even if symptoms improve.

• Mother: Antifungal creams – miconazole (Daktarin) 2% gel or cream applied after each feed

• Mother: check also for vulvovaginal candida and treat if present

• Baby under 4 months: nystatin drops, 1ml smeared over the oral mucosa with a clean finger

• Baby 4 months and over: miconazole 2% gel smeared over the oral mucosa with a clean finger

If a ductal candida infection is suspected (i.e. breast pain that does not resolve with the above measures), then discuss management with the on-call Infectious Diseases physician via switchboard.

• Oralfluconazole has a number of toxicities and the benefits and risks need to be considered prior to prescribing. This discussion should occur with the ID physician or Clinical Microbiologist, and may result in a one off dose of fluconazole 150 mg.

Breast abscess

A breast abscess is a complication of mastitis, and occurs in about 3% of cases. It is important to diagnose promptly as it causes pain and destruction of breast tissue. An abscess is a localised collection of pus that the body walls off. Once encapsulated it must be surgically drained/aspirated, as it is not connected to the ducts. Most common organism is Staphylococcus aureus. Occasionally other organisms may be cultured such as MRSA.

Symptoms

• Redness, fluctuant tender swelling

• Pain, often severe enough to prevent sleep

• Systemic symptoms and fever may have resolved

• It is not always possible to confirm or exclude the presence of an abscess by clinical examination alone, a diagnostic breast ultrasound will identify a collection of fluid