

MASTITIS



"Maternity", oil on canvas, Tamara de Lempicka, 1928.

MASTITIS

Introduction

Acute mastitis is usually associated with lactation and is frequently due to *Staphylococcus aureus*.

It should be distinguished from simple “congestive mastitis” (breast engorgement).

If systemic symptoms develop, early treatment with antibiotics is important to prevent abscess formation.

Epidemiology

Lactation related mastitis is extremely common, with incidence ranging from 10-30 % of lactating women.

It is most common in first few weeks and nearly all cases occur within first 3 months, post delivery - cases may occur as long as the woman is breast-feeding.

Pathophysiology

Organism:

The most common infecting organism will be *Staphylococcus aureus*.

Precipitating factors:

The major precipitating factors include:

1. Milk stasis from any cause:
 - Poor infant positioning
 - Poor infant feeding technique:
 - ♥ Too rapid weaning
 - ♥ Missed feeds
 - Tight constricting bra leading to overfilling of breasts, poor drainage and blocked ducts.
2. Nipple trauma

Clinical assessment

Assess for:

1. Systemic symptoms:
 - Fever.

- Constitutional symptoms.
2. Spreading cellulitis
 - Localised pain and swelling.
 - Tender, red, warm cellulitic regions on the breast.
 - There may be some associated axillary lymphadenopathy.
 3. Masses:
 - **A tender mass suggests an underlying abscess.**

Investigations

None are usually required in mild, uncomplicated cases.

In more severe cases or when an underlying abscess is suspected the following may be considered:

Blood tests

1. FBE
2. CRP
3. U&Es/ glucose
4. Blood cultures should be considered if the temperature is > 38.5 C

Ultrasound

- **This is important if an underlying abscess is suspected.**
- If symptoms are severe or cellulitis is extensive, then an ultrasound should be done to rule out a clinically inapparent deep seated abscess.

Swabs of purulent discharge

Microscopy and Culture and sensitivity testing of any purulent material expressed.

Breast milk culture and sensitivity:

For cases of severe mastitis, not responding to first-line antibiotics or requiring admission:

- Collect a hand-expressed mid-stream clean catch sample into sterile container (i.e. a small quantity of the initially expressed milk is discarded to avoid contamination with skin flora)²

Management

Principles of management include:

1. Milk expression and infant feeding:

Suckling or milk expression (manual or pump) from the infected breast should be continued and is safe.

In the absence of systemic symptoms in early mastitis, and without purulent discharge, increased feeding on the affected side and gentle expression may prevent progression.

Techniques to enhance enhancing breast milk drainage include:

- Physiological methods (e.g. expressing, massage and breastfeeding) to resolve the mastitis without the use of antibiotics
- Ensure correct positioning and attachment and frequent and effective milk removal
- Apply warmth to assist with let-down reflex and therefore milk flow and breast drainage
- Apply cold pack after feeds to reduce pain and oedema
- Avoid restrictive clothing/bra

If the baby is unable to feed directly from the affected breast, the breast should still be kept well drained by frequent and effective expressing until the mother is able to resume breastfeeding from that breast.

2. Ensure adequate maternal hydration.

3. Analgesia:

Non-pharmacological:

- Locally applied warm packs immediately *prior* to breastfeeding may assist milk flow.²
- Locally applied cool packs may give some symptomatic relief *following* breast feeds.²

Pharmacological:

Simple oral analgesics, that are safe in breastfeeding include

- **Paracetamol**

This is considered safe to be used by breastfeeding mothers.

It is usually the medicine of choice for short-term analgesia and anti-pyretic.

Maximum paracetamol dose is 4 grams per 24 hours.

- Non-steroidal anti-inflammatory drugs (NSAIDs):

Ibuprofen (and diclofenac) are the NSAIDS of choice in breast-feeding mothers.

These may be effective in reducing symptoms relating to inflammation.

They can be safely used while breastfeeding as only small/ negligible amounts of are excreted into breast milk.

4. Antibiotics:

Antibiotics will be indicated for:

- Cellulitis
- Development of systemic symptoms, such as fever
- Suspicion of (or actual) abscess formation

Options include:

Flucloxacillin:

- **500 mg orally, 6 hourly for at least 5 days.**

Cephalexin:

- **500 mg orally, 6 hourly for at least 5 days.**

Or if allergic to beta-lactams:

Clindamycin:

- **450 mg orally, 8 hourly for at least 5 days.**

If **severe** cellulitis has developed, antibiotics should initially be given **IV**.

IV antibiotics should be continued for at least **48 hours** or until **substantial clinical improvement** is seen.

Further options include:

Vancomycin:

- This is used as an alternative antibiotic for patients with serious allergy to penicillin and cephalosporins.

Only small amounts of vancomycin are excreted into breast milk and it is poorly absorbed and unlikely to cause any serious adverse effects in the breastfed baby.

Lincomycin:

- This is used as an alternative antibiotic for patients with serious allergy to penicillin and cephalosporins.

Only small amounts of lincomycin are excreted into breast milk and unlikely to cause any serious adverse effects in the breastfed baby.

See latest Antibiotic Therapeutic Guidelines for full prescribing details.

Change to oral therapy when symptoms are resolving.

Failure of symptoms to improve after 2 to 3 days suggests other pathogens, or an abscess requiring review, surgical drainage and bacteriological examination of the pus.

Disposition

Most cases can be managed as an outpatient, but hospital admission may be required for:

- Severe systemic symptoms
- Spreading cellulitis not responding to oral antibiotics
- Abscess formation
- Significant associated co-morbidities
- Maternal anxiety/ inability to cope with her baby

Referrals:

- Specialist **Nursing lactation consultant** .
- Women with a breast abscess need to be referred without delay to a **breast surgeon**.

The preferred management is needle aspiration, however surgical drainage is required in some cases.

References

1. eTG - March 2015
 - Antibiotic Therapeutic Guidelines 15th ed 2014.
2. Mastitis and Breast Abscess, Clinical Practice Guideline RWH, July 2012.

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