OBSTETRICS AND GYNAECOLOGY
CLINICAL PRACTICE GUIDELINE

Breast inflammation and infection: Mastitis and breast abscess

Scope (Staff):	WNHS Obstetrics and Gynaecology Directorate staff
Scope (Area):	Obstetrics and Gynaecology Directorate clinical areas at KEMH, OPH and home visiting (e.g. Visiting Midwifery Services, Community Midwifery Program and Midwifery Group Practice)

This document should be read in conjunction with this Disclaimer

Contents

Aim

- To resolve inflammation in the breast and promote continued breastfeeding and/or milk flow and recurrence.

Definitions

- **Dyad-** A pair / two individuals (this guideline refers to the mother- baby dyad)
- **Bacterial mastitis**- The progression from breast inflammation and ductal narrowing to an infection requiring antibiotic management to resolve.
- **Breast abscess:** A breast abscess is a localised collection of pus in the breast tissue which may occur as a complication of mastitis.
- **Inflammatory mastitis**- Occurs when ductal narrowing in the breast increases and this area of the breast becomes inflamed, warm, pink/red and painful.
- **Mastitis**- An inflammation of the breast that may or may not develop into a bacterial infection.

Mastitis

Background and signs / symptoms

Inflammatory mastitis

- **Signs and symptoms**: Systemic symptoms may occur as a result of the inflammatory response such as fever, chills, tachycardia and muscle pain.
- If managed appropriately, early inflammatory mastitis may resolve without antibiotics.

Bacterial mastitis

- **Contributory factors**: There are many factors that contribute to a mother's progress from a mild inflammatory response to bacterial mastitis. These contributing factors maybe maternal, infant and/or environmentally influenced and include poor position and attachment for breastfeeding, illness or separation, prematurity/vulnerability, breast surgery and poor management of milk production.
    - *Staphylococcus aureus* remains the most common infectious cause. Adequate specimens are essential.
- **Signs and symptoms:** Bacterial mastitis presents as worsening redness and firmness of the breast tissue due to increasing inflammation and persistent systemic symptoms of fever and tachycardia beyond 12-24 hours. These signs and symptoms may have a rapid onset.
- **Continue breastfeeding:** Bacterial mastitis is not contagious or a contraindication to breastfeeding, the mother is encouraged to continue to

breastfeed, offer her breast milk and continue to use standard cleaning for her expressing and feeding equipment.

Key points

1. Variations in management and treatment of mastitis are determined according to the individual mother/baby dyad, age of the baby and stage of lactation.
2. Continue breastfeeding and/or milk flow as mastitis is not an indicator for cessation of lactation.

Management

Inflammatory mastitis

1. Apply cold packs to the breast to reduce inflammation and give some symptomatic relief.
    - Heat is not recommended as it may worsen the inflammatory symptoms.
2. Nonsteroidal anti-inflammatory drugs (NSAIDS) and analgesia are encouraged to reduce inflammation and give pain relief.
3. **Breastfeeding and expressing**:
    - Prior to feeding and expressing encourage very gentle movements towards the underarm- this will assist moving the inflammation towards the lymphatic system.
    - Continue unrestricted breastfeeding with correction to position and attachment.
    - Continued milk removal is important during breast inflammation to prevent overfilling of the breasts, relieve symptoms and protect the mother's milk supply.
    - Breastmilk supply is easily downregulated by breast inflammation and poor milk removal.
    - Express the breasts by hand or with an electric breast pump to comfort and to meet the baby's needs if the baby is not breastfeeding or not breastfeeding well.
    - Guide the mother with expressing to avoid incorrect breast shield size and high suction which will cause tissue damage and further inflammation.
    - Lactating breasts require support, encourage the mother to wear a comfortable, supportive, appropriately fitted bra and avoid restrictive clothing.
4. Deep massage on breast tissue is **not recommended** as this can increase inflammation.
5. Guide the mother to rest, take adequate fluids and have support with domestic duties if available.
6. Discuss use of therapeutic ultrasound to reduce inflammation.
7. Seek prompt medical consultation if there is increasing inflammation and persistent systemic symptoms of fever and tachycardia beyond 12-24 hours.

Bacterial mastitis

1. Ensure prompt medical consultation.
2. Collect a midstream expressed breast milk (EBM) sample and nipple swabs for microscopy, culture and sensitivity (MC&S).
    - **Always send a milk sample to MC&S**.
    - This is especially the case if there is recurrent mastitis as staphylococcal resistance to the agents listed below (e.g. due to MRSA) is increasing in prevalence.
3. Commence appropriate prescribed antibiotic therapy for 10-14 days (see antibiotics section below)
4. **Breastfeeding and expressing**:
    - Continue breastfeeding, with correct positioning and attachment.
    - If the baby refuses the affected breast, then the mother will need to express the milk to comfort and to meet the needs of her baby.
    - Breastfeeding and/or feeding expressed milk should continue during a course of antibiotics. Continued breast feeding or milk expression (manually or by pump) from the infected breast should be continued to ensure effective milk removal. There is no evidence of risk to the healthy, term infant of continuing breastfeeding.
    - When the mother is admitted to hospital for intravenous antibiotic therapy the mother/baby dyad should remain together for continued breastfeeding.
    - Always assess if the milk supply is adequate for baby wellbeing. Review output, feed frequency, effective milk transfer and weight. If any concerns, short term supplementation may be required and/or have baby reviewed by a Medical Officer.
    - Mothers with breast inflammation and mastitis require follow up and individualised lactation support, provide contact details for the Breastfeeding Centre: 6458 1844.
5. Apply cold therapy and commence NSAIDs and analgesia as required.
6. Provide the mother with the Mastitis consumer fact sheet
7. Discuss the use of therapeutic ultrasound to reduce inflammation.
8. If a breast abscess is suspected, or mastitis has not resolved after 48 hours of antibiotics, refer for a diagnostic ultrasound. Refer to section ‘Breast Abscess’.

Weaning lactation within the mastitis spectrum

- If a woman requests to wean when mastitis is present, advise her to express to comfort until the mastitis resolves to reduce the risk of developing a breast abscess, weaning should take place gradually where possible. The woman should gradually decrease the number of expressions per day over a period of several days. Once her milk supply is minimal then cease expressing.

- If the woman chooses to wean abruptly despite the above advice, then antibiotic cover may be necessary until the inflammatory processes have resolved. In these circumstances refer to a Medical Officer to discuss pharmacological suppression of lactation.

Antibiotics

Group B Streptococcal resistance to clindamycin is also increasing and a substantial proportion of *S. aureus* isolates are clindamycin resistant. Although most patients will be expected to respond to the following oral regimens, **checking of susceptibilities is important** as susceptibility cannot be assumed.

Flucloxacillin 500mg orally, 6 hourly for 10 days (taken ONE hour before meals)

- **For patients hypersensitive to penicillin** (excluding immediate hypersensitivity):
  - Cefalexin 500mg orally, 6 hourly for 10 days
- **For immediate hypersensitivity to penicillin use**:
  - Clindamycin 450mg orally, 8 hourly for 10 days

If **severe cellulitis** has developed, antibiotics should be given intravenously (IV):

- Flucloxacillin 2g IV 6 hourly

  OR
- **For patients with delayed type, non- severe hypersensitivity to penicillin** use: Cefazolin 2g IV 8 hourly

  If immediate hypersensitivity to penicillin (evidenced by urticaria, angioedema, bronchospasm or anaphylaxis or a history of other severe reactions such as DRESS syndrome or Stevens Johnson /toxic epidermal necrolysis syndrome):
  - Vancomycin IV - See Vancomycin monograph for dosing, or if organism with known susceptibly to clindamycin, use Clindamycin 600mg IV 8 hourly

Notes: The KEMH microbiology service is available for telephone advice if required for severe or complex cases.

More information on managing patients with a history of reactions to penicillin can be found by searching “antimicrobial hypersensitivity” in Therapeutic Guidelines: Antibiotic.

IV therapy is given for typically 48-72 hours, then if substantial clinical improvement, **change to oral** treatment regimen as listed above appropriate for organism susceptibilities (either of flucloxacillin or cefalexin or clindamycin) for a total duration of ten days (intravenous + oral).

Additional lactation support for women with mastitis

Women with mastitis and a healthy term baby

1. Encourage skin to skin in the first few days to promote frequent, flexible breastfeeds.

2. A healthy term newborn will need to be offered each breast about 8-12 times in 24 hours to initiate and maintain a milk supply and promote adequate weight gain.
3. Correct position and attachment to ensure effective breastfeeds to optimise milk production and help prevent inflammation, engorgement and mastitis.
4. If the baby is sleepy, ineffective at the breast or there is any doubt about adequacy of the breastfeed the mother will need to keep the breast stimulated and the milk moving by expressing by hand or use an electric breast pump at each feed and give the colostrum/milk to her baby.
5. Offer alternate breasts at each feed.
6. Breast inflammation and low supply is more likely if milk removal is compromised and mother's use restrictive breastfeeding practices.

Women with mastitis and a vulnerable infant

See WNHS Obstetrics and Gynaecology 'Newborn Feeding and Maternal Lactation' guideline for description and details of a vulnerable newborn baby.

1. Vulnerable infants require an individual plan for regular breastfeeding, expressing and supplemental feeding.
2. Support and follow up is essential.

Women with mastitis and an abundant milk supply

1. If the mother is expressing well above her baby's requirement, support her to reduce her expressing slowly.

Discharge planning

1. Provide the mother with the Mastitis fact sheet. [add link once found]
2. Assess requirement for an electric breast pump loan.
3. For lactation support and follow-up- provide the mother with the Breastfeeding Centre details: 6458 1844.

Recurrent mastitis

Requires investigation to determine causative factors. Consider:

- Has initial mastitis infection been treated effectively?
- Was the prescribed antibiotic appropriate?
- What are the predisposing factors to the mastitis, and have these been resolved or addressed?

Referral to the Breastfeeding Centre: 6458 1844 for individualised lactation review.

Breast abscess

Background and signs / symptoms

- **Risk factors** for breast abscess include inadequately treatment mastitis and abrupt weaning during acute mastitis.
- **Signs and symptoms**: Are similar to those for mastitis with increased localised swelling, pain and tenderness in the breast.
- Occasionally women who have had recent mastitis may present with an encapsulated abscess and have no current systemic symptoms.

Initial management

1. Referral for a diagnostic breast ultrasound is required for confirmation, sizing, and a guide to drainage of the abscess.
2. Breastfeeding or breastmilk expression is safe and should continue uninterrupted.
3. Pain relief as required using NSAIDs and analgesia.
4. Contact the Breastfeeding Centre 6458 1844 for review and ongoing individualised lactation support.
5. Referral to a breast surgeon is required for surgical aspiration/drainage.
6. MC&S of the breast abscess aspirate will ensure antibiotic sensitivity.

Management following aspiration / surgical drainage

1. If breastfeeding from the affected breast is not possible, the milk should be expressed to meet the needs of the baby until it is comfortable to resume breastfeeding.
2. Position and attachment guidance may be required to avoid contact/pain from aspiration/incision site.
3. Breastmilk may flush through the incision/aspiration site-this is common and will promote healing.
4. Massage of the affected area is not recommended.
5. For lactation support and follow-up provide the mother with the Breastfeeding Centre details:6458 1844.

References

Bibliography

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Lauwers L, Swisher S. Counseling the nursing mother: A lactation consultant's guide. 6th edition. Jones and Bartlett Learning. 2016.

Walker M. Breastfeeding management for the clinician: Using the evidence. 4th ed. Boston: Jones and Bartlett; 2017.

Related legislation and policies

Related WNHS policies, procedures and guidelines

WNHS Clinical Guidelines:

Obstetrics and Gynaecology:

- Infections in Obstetrics: (Intra-amniotic Chorioamnionitis and Postpartum Infection): Diagnosis and Management
- Patient Movement: Referral to Silver Chain

Pharmacy A-Z Medication Monographs

Useful resources (including related forms)

- WNHS Breastfeeding website (includes mastitis patient information tab and general patient resources and videos e.g. Positioning and Attachment, Mastitis)
- Breastfeeding Centre of WA

Related forms

- MR261.16 Management of Mastitis variance
- MR261.17 Breast Abscess Variance

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NSQHS Standards (v2) applicable:	☒ 1: Clinical Governance ☒ 2: Partnering with Consumers ☒ 3: Preventing and Controlling Healthcare Associated Infection ☒ 4: Medication Safety	☒ 5: Comprehensive Care ☐ 6: Communicating for Safety ☐ 7: Blood Management ☒ 8: Recognising and Responding to Acute Deterioration	
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Version history

Version number	Date	Summary
1	Aug 2020	First version. Amalgamated two individual guidelines on breast infections dating from May 2003: 1. Breastfeeding Challenges: Mastitis Management (dated May 2017) 2. Breastfeeding Challenges: Breast Abscess (dated Feb 2019)
1.1	10/09/2020	Minor amendment- corrected spelling of ‘women’
2	Dec 2023	• Title changed to ‘Breast Inflammation and Infection: Mastitis and Breast Abscess’. Whole guideline reviewed and restructured, with changes to language and guidance around mastitis and breast abscess- read guideline. • New sections added for definitions, breastfeeding / expressing, additional lactation support, recurrent mastitis and aspiration of abscess

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