Breast infections

"As a GP trainee I prescribed Flucloxacillin 250mg qds for 1 week for my patient, a breastfeeding mother. She returned later and was seen by my trainer, having developed a breast abscess. Why, he asked me, had I prescribed only 250mg capsules? Twenty years later I find one of the trainees in our practice prescribing Flucloxacillin 250mg qds for 1 week for a patient with mastitis."

So what should we be prescribing? The evidence isn’t new, but we feel the message may not be getting through so we thought we remind you about this!

We commonly see breast infections in lactating women which can be distressing and debilitating and can interfere with early breast-feeding and bonding. The aetiology is different in non-lactating women and we need to consider whether further investigation is warranted.

The authors highlight the importance of early appropriate antibiotics and avoiding delays in referral for surgical management if oral antibiotic therapy is failing as delay can result in loss of breast tissue and asymmetry.

Statistics and epidemiology

- 10–33% of lactating women will get mastitis; breast abscesses are less common.
- Most common in the first 6 weeks of breast-feeding with a further peak around the time of weaning.
- In non-lactating women, diabetes, immunosuppression and smoking are risk factors, as are recurrent sebaceous cysts and hidradenitis suppurativa.
- Staphylococcus aureus and Staphylococcus epidermidis are most common organisms in lactating women, enterococci and anaerobes are also seen in non-lactating women.

Presentation

In lactating women
The infection tends to be in a localised segment (associated with blockage of a milk duct) but with time can spread to an entire quadrant. Women complain of:

- Difficulty breast-feeding.
- Poor milk drainage.
- Engorgement and erythema.
- Nipple excoriation.
- Fever, fatigue and rigors.

In non-lactating women
This tends to be a more diverse group of infections with different aetiology. They are categorised into three groups:
Central/ sub-areolar infections:
90% of cases will be seen in smokers and can be seen in men. This is due to damage to sub-areolar ducts which can then become infected.
- Inflammation around areolar +/- lump, nipple retraction and discharge.
- May also be associated with nipple piercing.
- Anaerobic bacteria are common.

Peripheral non-lactating infections:
- Presentation is similar to mastitis as above.
- Less common in non-lactating women but is associated with diabetes, rheumatoid arthritis, steroid treatment, breast trauma and granulomatous disease.
- Occasionally associated with carcinoma in situ.

Skin infections:
- Sebaceous cysts and superficial cellulitis are both common.
- Obesity, large breasts, breast surgery and radiotherapy are risk factors.
- Tends to occur on lower half of breasts where sweat accumulates.

Management

In lactating women
- Continue to breast-feed or use breast pump to encourage milk flow from the engorged segment.
- Prescribe an appropriate antibiotic for 10 days:
  - Flucloxacillin first-line
  - Erythromycin if penicillin-allergic
  - Co-amoxiclav or clarithromycin are alternatives in more severe infection or intolerance.
- DO NOT use chloramphenicol, tetracyclines or ciprofloxacin as they enter breast milk and may be harmful to infants.
- There is no evidence to support the co-prescription of fluconazole.
- Analgesia and ice packs (or cabbage leaves!) may help to relieve symptoms.
- A Cochrane review found one RCT that compared antibiotics to breast emptying alone and found faster clearance in the group who took antibiotics (2.1 vs. 4.2 days).
- Refer if symptoms are not settling after one course of antibiotics, if situation is deteriorating on oral treatment, or if clinical evidence of abscess formation.

In non-lactating women
The authors recommend:
- Co-amoxiclav or if penicillin-allergic erythromycin + metronidazole to cover anaerobic bacteria. (The authors do not specifically address non-lactating women with superficial breast skin infections – flucloxacillin would seem a reasonable first-line antibiotic for this group.)
- Treat for 10 days.
- Refer urgently for drainage of abscess if not resolving after one course of antibiotics or if deteriorating despite oral treatment.
- Patients aged >35y with peripheral infection and no obvious cause should be investigated once infection has resolved.
The remainder of the review considers the optimal method of drainage of breast abscesses from a secondary care perspective.

### Breast infections

- The aetiology of breast infections and abscesses is different in lactating and non-lactating women.
- Prescribe antibiotics early to reduce risk of breast abscess formation and speed recovery.
- For lactating women 10d of flucloxacillin (or erythromycin if penicillin-allergic).
- For non-lactating women with a deep abscess 10d of co-amoxiclav (or erythromycin + metronidazole) to cover anaerobes.
- If not resolved after one course of antibiotics refer urgently to breast surgeons for drainage.
- For non-lactating women >35y with unexplained peripheral infection refer for investigation to exclude ductal carcinoma in situ.

### Learning

**Check what your local guidelines** are for antibiotics in mastitis (Ours are Flucloxacillin 500mg qds for 14 days or erythromycin 500mg-1g bd or 250mg-500mg qds for 14 days). The article suggests 10 days treatment and it seems to me that committing to 14 days treatment in all cases is excessive, I have often prescribed 7 days initially. Is this an issue you could discuss with your team?

**Write a brief reflection** on the article, your review of your local guidelines, and whether this has led to any changes in your practice.

**Run an audit** of your patients seen in the last 3 years with a READ code for mastitis or breast infection. What antibiotics did you prescribe? What dose? What duration? Were there any failures to respond to treatment or complications?

### Diagnosis of mastitis

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<thead>
<tr>
<th>Patient number</th>
<th>Antibiotic with dose and duration</th>
<th>Treated according to local protocol</th>
<th>Not treated according to local protocol</th>
<th>Failure to respond/complications?</th>
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Write a brief reflection on your findings and whether this has led to any changes in your practice.
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