



A guide to common breast problems

Key points

- Common breast-related reasons for women to present to their GPs include breast pain, infections and lumps, and nipple discharge.
- A sound approach to breast complaints involves careful history-taking, including a hormone and family cancer history, a thorough breast examination, and imaging or specialist referral when appropriate.
- Breast pain is rarely a symptom of cancer; it can be cyclical or noncyclical and a common cause is chest pain.
- Breast infections require early treatment with appropriate antibiotics to avoid abscess formation.
- Breast lumps should be assessed with the triple test: history and clinical examination, imaging and nonexcision biopsy.

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A sound approach to breast complaints can reduce anxiety for both patients and doctors. This involves careful history-taking, a thorough clinical examination and understanding when to refer for imaging or to a specialist.

Almost every GP will see patients with breast problems. Most of these patients are women, and their complaints range from obviously benign conditions to symptoms potentially associated with breast cancer. Many patients are understandably anxious, and a fine balance is needed between reassuring the patient and making her feel that her problem is being taken seriously.

This article aims to guide GPs through four common female breast presentations – breast pain, breast infections, breast lumps and nipple discharge – and to provide a simple framework to deal with these. The key to managing all four problems is to master the

basics of taking a breast history and performing a clinical breast examination, and to understand when imaging or specialist referral are required.

Important points in taking a history for a breast problem and in examining the breast are shown in the boxes on page 26.

BREAST PAIN

Breast pain is one of the most common breast-related reasons for presentation. Patients often believe the cause is sinister. However, breast pain is rarely a symptom of cancer. The vast majority of cases of breast pain represent normal physiological change. Nevertheless,

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as a general rule, unless the cause of the pain is very clear, imaging should be performed. This is as much to reassure the patient as to exclude a breast lesion.

TAKING A BREAST HISTORY

Presenting symptoms

- Lump – size, duration, associated pain, sudden increase
- Change in shape of breast or nipple and any skin changes
- Pain – site, exacerbating and relieving factors, association with menstrual cycle
- Nipple discharge – colour, spontaneity, frequency, unilateral or bilateral
- History relevant to presenting symptom – e.g. recent trauma to the breast, current lactation

Personal history

- Age
- Previous breast or ovarian cancer
- Previous breast surgery, including needle biopsies, excision biopsies, reduction mammoplasty and breast augmentation
- Previous imaging and screening history
- Other past medical and surgical history

Hormone history

- Age at menarche
- Menopausal status
- Gravidity, parity, age at first full-term pregnancy
- Breastfeeding
- Use of hormone therapy or the oral contraceptive pill
- Use of in vitro fertilisation

Family history

- Breast and ovarian cancer – number of affected first, second and third degree relatives, age of onset of cancer, cases of male breast cancer and bilaterality
- Other cancers
- Ashkenazi Jewish background

True breast pain can be cyclical (varying over the menstrual cycle) or noncyclical. However, in many women who present with breast pain, the pain is actually chest wall related. Other nonbreast-related causes of apparent breast pain include cardiac, lung and gallbladder disease and shingles.

Cyclical mastalgia

Cyclical mastalgia refers to breast pain that occurs in relation to a woman's menstrual cycle. It tends to affect both breasts

in a symmetrical distribution, and is usually worse just before menstruation and relieved with the onset of menstruation. The cause of cyclical mastalgia is not certain, but it may be related to overproduction of prolactin and oestrogen or underproduction of progesterone.

There are studies (albeit not rigorously conducted) that suggest reducing salt, caffeine and fatty foods in the diet and reducing smoking may be useful in alleviating this pain. Vitamin B₁ and vitamin B₆ may also help. Evening primrose oil may be helpful but has yet to be studied rigorously. It should be given at a dose of 1 gram three times a day and, if there is a benefit after three months, should be continued for a total of six months. It is wise to warn the patient that this dose may cause nausea. If the pain is persistent and significant, prescription drugs may help (e.g. tamoxifen and danazol), but at this point referral to a breast specialist is indicated.

Noncyclical mastalgia

Noncyclical mastalgia is not as well characterised as cyclical mastalgia and has few associated factors. Some degree of noncyclical pain is present at puberty and during pregnancy, related to changes in hormone levels, but usually this pain occurs in older women. Other causes are mastitis or medications, such as digoxin, frusemide, spironolactone and antipsychotic medications. Cessation of these medications, a well-fitting bra and simple analgesia may be useful.

Chest wall pain

Chest wall pain is one of the most common causes of perceived breast pain. It often arises from intercostal muscles, ligaments or the ribs. It frequently occurs in women with desk jobs who use a computer for long periods. The side of the pain is unrelated to the dominant arm.

A simple way to distinguish chest wall pain from true mastalgia is to roll the

EXAMINING THE BREAST

Inspection

- Symmetry
- Skin
 - Dimpling
 - Tethering
 - Ulceration
 - Peau d'orange
 - Erythema/redness
- Nipple changes – rash/eczema, inversion (see Figure 1)

Palpation

- Work in an organised fashion to cover the entire breast, axillary tail and behind the nipple
- Compare for symmetry with the contralateral breast
- Examine axillary and supraclavicular lymph nodes
- Squeeze the nipple to elicit discharge (if you cannot obtain any discharge in a patient who presents with this symptom, ask the patient to squeeze the nipple for you – patients tend to squeeze more firmly than you would)
- Ask the patient to point out lumps that you have difficulty feeling

Documentation

- It is easy to confuse the two sides of the breast and also the 'o'clock' positions. It is safest to draw your findings on a diagram



Figure 1. Paget's disease of the left breast in a 40-year-old woman. Nipple changes in Paget's disease can be subtle, as in this case, which shows flattening and slight scaliness. The rectangular area of redness around the nipple was caused by a dressing that the patient applied. Paget's disease of the breast is almost always associated with an underlying cancer.



Figure 2. Periductal mastitis in a nulliparous 26-year-old woman, showing inflammation and chronic ulceration due to de-roofing of an abscess. The underlying cause was a mammary fistula, found during surgical exploration.

Lactational infection

Infection during lactation is most common in the first six weeks of breastfeeding, usually as a result of *Staphylococcus aureus* entering a cracked nipple or skin abrasion. Involving a lactation consultant is useful in treatment. Women who wish to continue breastfeeding should be encouraged to continue feeding from the affected breast or to express from that breast.

Ultrasound imaging should be performed to exclude abscess formation. Women who are lactating often have dense breast tissue that makes mammograms difficult to interpret.

Lactational abscesses can often be treated by repeated percutaneous aspiration under ultrasound guidance. The patient may continue to feed from the treated breast after aspiration. Open drainage is usually not required unless the abscess is very superficial and pointing, and would drain well with a small incision under local anaesthesia. Rarely does a patient with a breast abscess need a large drainage incision under general anaesthesia. The drained pus should be sent for microscopy and culture to ensure the treating antibiotic is appropriate.

After the acute infection has settled, a

PRINCIPLES OF TREATING BREAST INFECTION

- Treat with appropriate antibiotics early to avoid abscess formation
- Refer to a specialist or hospital if infection does not settle rapidly with antibiotics or if systemic symptoms persist
- If an abscess is suspected, confirm with an ultrasound examination
- Remember that most abscesses can be successfully managed with percutaneous aspiration in the first instance
- Exclude a breast cancer in patients with a solid lesion on ultrasound examination or aspiration that does not settle with adequate antibiotics

patient so the breast drops away from the site of the pain and to palpate the chest wall without the breast overlying it. Patients with chest wall pain will continue to have tenderness in that location but not in the actual breast tissue. It can be helpful to get the patient to look down at the position of your fingers during the examination to illustrate that the tenderness does not arise from their breast.

Treatments for chest wall pain include a well-fitting bra (it may help if this is worn when sleeping), simple analgesia, topical anti-inflammatories (to the chest wall rather than the breast tissue) and gentle stretching exercises (e.g. swimming). The best remedy for chest wall pain is reassurance.

BREAST INFECTION

Breast infection can be lactational or non-lactational. Nonlactational breast infection is classified by the area of the breast affected – periareolar, peripheral or skin-associated. The principles of treating breast infection are outlined in the box on this page.

repeat ultrasound examination in three months is advisable to check whether any mass remains.

Nonlactational infection

Periareolar infection

Periareolar infection occurs as a result of periductal inflammation in the areolar region of the nipple and is sometimes called periductal mastitis. It often presents as an abscess in this area (Figure 2). On clinical examination, ensure there is no nipple discharge associated with palpation of this region, which might indicate a mammary duct fistula. It is thought that duct ectasia (dilation of the subareolar breast ducts) predisposes to this type of infection. Smoking has also been shown to be an important factor.

An ultrasound examination should be performed to exclude an abscess or other mass. As the infecting organisms in this type of infection are usually mixed, cover against Gram-negative and anaerobic bacteria is needed; amoxicillin-clavulanic acid and metronidazole are usually sufficient.¹ Smoking cessation also helps.



Figure 3. Intertrigo of the inframammary fold with secondary fungal infection, a common complication.



Figure 4. Postsurgical cellulitis showing erythema and swelling surrounding a surgical wound.

Abscesses in this area should be managed surgically as for lactational infection. If a mammary fistula is present, refer to a specialist, as surgery may be needed. Occasionally the only way to manage chronic periductal infection is with duct excision.

Peripheral breast infection

Peripheral breast infection is not as common as periareolar infection. It may be associated with underlying illnesses such as diabetes, corticosteroid treatment and granulomatous mastitis (a condition affecting young parous women, with multiple peripheral breast abscesses). Treatment principles are the same as for other breast infections – exclude a cancer on imaging, give appropriate antibiotics and treat abscesses with aspiration or incision/drainage.

Skin-associated breast infection

Infection of the skin of the breast is very common. It tends to occur in women with large breasts and usually affects the lower half of the breast. A common presentation is infection as a result of excoriation of the inframammary skin fold, leading to intertrigo or fungal infection – a problem exacerbated by hot weather and sweating (Figure 3). This can provide a portal for entry of bacteria, usually *S. aureus*. Other

predisposing factors include recent surgery, radiotherapy and pre-existing lesions, such as a sebaceous cyst or hidradenitis suppurativa (Figure 4).

Treat as for any cellulitis or abscess, with appropriate antibiotics and drainage of pus. For patients with recurring inframammary skin fold problems, a simple tip is to wear a cotton handkerchief or garment (even a cotton breast pad) between the skin and the bra, to absorb excess moisture. Good hygiene and drying the underside of the breast well after washing are also important; using a hairdryer on a cool setting after patting the area dry is the best way to achieve complete dryness of this difficult area. Antifungals and emollients are often unnecessary if the patient complies with this regimen.

BREAST LUMPS

Common causes of a palpable breast lump include prominent fibroglandular tissue (normal breast tissue), a cyst, fibroadenoma, abscess, lipoma, fat necrosis, haematoma and breast cancer.

In patients presenting with a breast lump, the task of the GP is:

- to determine whether there is a true mass
- to ascertain the patient's risk factors for breast cancer

- to organise the appropriate imaging
- if necessary, to obtain a tissue diagnosis. A breast lump should be assessed with the triple test:²
 - history and clinical examination
 - imaging – mammography and/or ultrasound examination
 - nonexcision biopsy – fine needle aspiration cytology (FNAC) and/or core biopsy.

Breast imaging

Breast imaging is a crucial component of the triple test. It is essential to order the correct investigation(s) and to communicate effectively with the radiologist to ensure the correct diagnosis is made in a timely fashion.

Mammography and ultrasound examination are the most used modalities for imaging breast lumps. In women over 35 years of age, mammography is the primary modality used but all women presenting with a palpable lump should also have an ultrasound examination. Ultrasound is acceptable as the investigation of first choice for women under 35 years of age and may be used as the only imaging modality for younger women and those who are lactating, but is often used as a complement to mammography.³

When requesting imaging, it is useful to draw a diagram showing the location of the lump of concern. If the patient will undergo the imaging investigation on the same day as your clinical examination, another useful tip is to draw the location of the lump on her skin, with her arm behind her head – the standard position used by most breast sonographers. This is especially helpful for lumps that are difficult to feel or located in generally nodular areas of the breast.

Nonexcision biopsy

There is often confusion about which biopsy technique to use – FNAC or core biopsy – to investigate a breast lesion. These procedures are complementary.⁴

KEY POINTS IN TAKING A HISTORY FOR NIPPLE DISCHARGE

- Is the discharge from a single duct or multiple ducts?
- Is the discharge spontaneous or only on expression (squeezing)?
- What colour is the discharge?
- Is it associated with a mass?
- What medications is the patient taking?
- Is the patient lactating?

The benefits of FNAC include a shorter procedure, quick results (possibly even on the same day) and a decreased risk of haematoma. FNAC is suitable for small lesions where there is concern that a core biopsy may remove too much tissue for the lesion to be located later, but these lumps are usually palpable. The difficulty with FNAC is that it yields indeterminate or insufficient results more often than a core biopsy, and the patient may therefore require a further procedure.

Core biopsy, on the other hand, requires local anaesthesia, results are slower to obtain, and it causes more discomfort and postprocedure complications. However, unlike FNAC, core biopsy frequently enables invasive cancer to be distinguished from ductal carcinoma-in-situ (DCIS), and it has a higher sensitivity and specificity. If there is uncertainty about which investigation would be best, contact or refer to a breast specialist.⁵

It is wise to thoroughly document your examination findings before biopsy as a haematoma may alter findings afterwards. A breast surgeon attempting to remove a lump composed largely of haematoma may discover it has resolved by the time of surgery.

If results of imaging and biopsy are normal but there is a persistent worrying

lump or change in the breast, do not hesitate to refer the patient to a specialist, as some cancers present in this fashion.

NIPPLE DISCHARGE

Twenty per cent of women have a physiological discharge that can be elicited by squeezing the nipple. This varies in colour from yellow to green to black. Galactorrhoea causes a bilateral milky discharge, and a careful drug history should be taken (especially for psychotropic agents), and prolactin levels checked. Key points in taking a history for a nipple discharge are shown in the box on this page.

A bloody or haemoserous, spontaneous or single-duct nipple discharge requires further investigation. Use a urinalysis stick to test the discharge for blood. Mammography and ultrasound examination should be performed to exclude a mass lesion such as a papilloma. Even if imaging does not find anything suspicious, patients with this type of discharge should be referred to a specialist as duct excision may be warranted for further investigation. Patients who have persistent mult duct discharge that appears physiological should also be referred if their symptoms are distressing enough to warrant surgery.

Women presenting with a physiological discharge should also undergo routine imaging to exclude pathology. If no abnormality is found, they should avoid squeezing the nipple for three months and then return for follow up to check whether the discharge has settled.

CONCLUSION

A systematic approach is required to diagnose and treat common breast problems. This can be achieved through practice. Conveying confidence, listening carefully to the patient's concerns and giving measured reassurance will reduce patient anxiety. If any features of concern

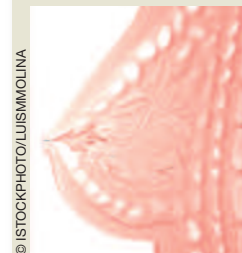
are noted, prompt referral to a breast specialist is indicated. **MT**

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