CASE FOUR

Short case number: 3_11_4
Category: Endocrine and Reproductive
Discipline: Surgery
Setting: General practice
Topic: Breast – Benign conditions of the breast

Case

Martha Henderson, aged 42 years, presents complaining of breast pain. She advises that the pain is worse leading up to her menses but settles afterwards. She is concerned that the pain is getting worse.

Questions

1. Outline how you would manage this case in terms of further history, examination and investigation.
2. On examination you identify a palpable breast mass. Using an algorithm, summarise the management of a palpable breast mass.
3. Martha is subsequently found to have fibroadenoma. Summarise the classical presentation of fibroadenoma in terms of presenting age, clinical features on examination and histology.
4. Breast cysts are the most common cause of breast mass in women in their 4th and 5th decades of life. Summarise the key clinical features of breast cysts.
5. Summarise the key features of investigation of a women with nipple discharge in terms of history, examination and investigation.
6. Outline the differences in presentation and treatment of a breast abscess compared to breast mastitis.

Suggested reading:

1. Henry MM, Thompson JN, editors. Clinical Surgery. 3rd edition. Edinburgh: Saunders; 2012. Chapter 28.
2. Garden OJ, Bradbury AW, Forsythe JLR, Parks RW, editors. Davidson's Principles and Practice of Surgery. 6th edition. Philadelphia: Churchill Livingstone Elsevier; 2012. Chapter 19.

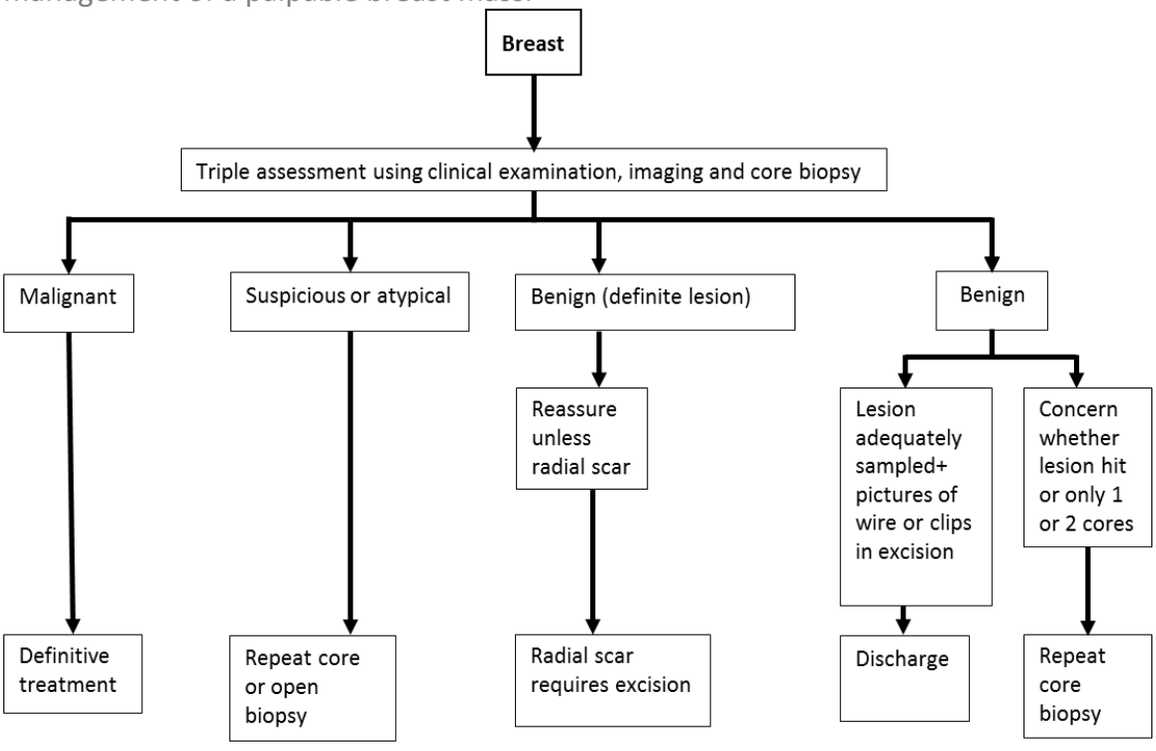
ANSWERS

1. Outline how you would manage this case in terms of further history, examination and investigation.

   Premenstrual nodularity and breast discomfort are so common that they are considered part of the normal cyclical changes. When premenstrual pain is severe, interferes with daily activities and influences quality of life, then this is classified as moderate or severe cyclical mastalgia. There is no association between cyclical breast pain and any underlying histological abnormality. The cause of cyclical mastalgia is unknown. Another common and significant problem is non-cyclical mastalgia.

   - Need to establish cyclical / non-cyclical nature
   - Differentiate breast pain from chest wall and muscular pain
   - Determine effect of pain on daily activity (this may influence treatment)
   - Assess risk factors for breast cancer

2. On examination you identify a palpable breast mass. Using an algorithm, summarise the management of a palpable breast mass.



3. Martha is subsequently found to have fibroadenoma. Summarise the classical presentation of fibroadenoma in terms of presenting age, clinical features on examination and histology.

   Fibroadenomas are classified in most texts as benign tumours, but are best considered as aberrations of development rather than true neoplasms. The reasons are that fibroadenomas develop from a single lobule rather than from a single cell, and show hormonal dependence similar to that of normal breast tissue, lactating during pregnancy and involuting in the peri menopausal period. Fibroadenomas are most commonly seen immediately following the period of breast development and growth in the 15-25-year age group.

They are usually well-circumscribed, firm, smooth, mobile lumps, and may be multiple or bilateral. Although a small number of fibroadenomas increase in size, most do not and over one-third become smaller or disappear within 2 years. Fibroadenomas have a characteristic appearance with easily visualized margins on ultrasound.

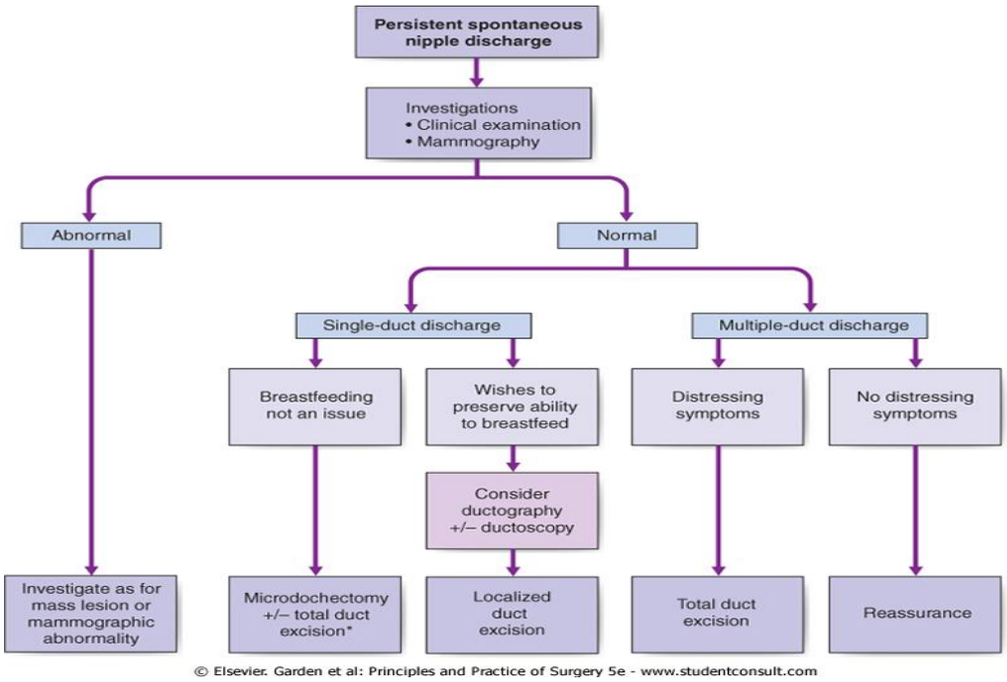
4. Breast cysts are a common cause of breast mass in women in their 4th and 5th decades of life. Summarise the key clinical features of breast cysts.

Approximately 7% of women in developed countries develop a palpable breast cyst at some time in their life. Cysts constitute approximately 15% of all discrete breast masses. They are distended, involuted lobules and are most frequently seen in the perimenopausal period.

1. Clinically - smooth discrete lumps that can be painful and are sometimes visible.
2. Mammographically - characteristic haloes and are easily diagnosed by ultrasonography

Symptomatic palpable cysts are treated by aspiration and, provided the fluid is not blood-stained, it is discarded. If aspiration results in the disappearance of the mass, then the patient can be reassured. Cysts that contain blood-stained fluid require excision to exclude an associated intracystic cancer. These cancers are rare and are usually evident on ultrasound. Most cysts are asymptomatic and, provided they are appropriately investigated by ultrasound, do not need aspiration. All patients with cysts should have mammography, preferably before cyst aspiration, as between 1 and 3% will have a cancer, usually remote from the cyst, visible on mammography.

5. Summarise the key features of investigation of a woman with nipple discharge in terms of history, examination and investigation.



Ultrasound is useful to assess for dilated duct(s) that may be responsible for nipple discharge. Abnormal imaging findings require biopsy +/- excision.

6. Outline the differences in presentation and treatment of a breast abscess compared to breast mastitis.

Lactating Infection

Infection usually develops within the first 6 weeks of breastfeeding or, occasionally, during weaning. Presenting features are pain, swelling, tenderness and a cracked nipple or skin abrasion. *Staphylococcus aureus* is the most common organism, although *Staph. epidermidis* and streptococci are occasionally implicated. Drainage of milk from the affected segment is often reduced, with the resultant stagnant milk becoming infected.

Non-Lactating Infection

- Central (peri-areolar) infection

This is most commonly seen in young women (mean age 32 years). The underlying cause is periductal mastitis.

Current evidence suggests that smoking is important in the aetiology of non-lactational infection, 90% of women who present with periductal mastitis or its complications being smokers. Substances in cigarette smoke either directly or indirectly damage the subareolar breast ducts, and the damaged tissue then becomes infected by either aerobic or anaerobic organisms. Initial presentation is with peri-areolar inflammation, with or without an associated mass, or with an established abscess. Clinical features include breast pain, erythema, peri-areolar swelling and tenderness, and/or nipple retraction; these occur in relation to the affected duct.

- Peripheral non-lactating abscesses

These are less common than peri-areolar abscesses and are sometimes associated with an underlying condition, such as diabetes, rheumatoid arthritis, steroid treatment, granulomatous lobular mastitis or trauma. Infection associated with granulomatous lobular mastitis can be a particular problem, as there is a strong tendency for this condition to persist and recur despite surgery. This condition usually affects young parous women, who develop large areas of inflammation with multiple simultaneous peripheral abscesses.