

Chapter 5



Breast

5.1 Breast, Anatomy

Breasts, also called ‘Mamma’ are mammary glands, subcutaneously placed on the ventral side of the trunk in mammalian species, and develop for the sole purpose of secreting milk for the offspring during the fertile period.

They develop along a ‘Milk line’, which runs from axilla to the groin on both sides (5.1a). Number of nipples varies according to the species and the number of offspring produced by them.

In humans, only one breast develops on either side of anterior chest wall. Accessory breasts occasionally develop in the axilla (5.1b).

Normally size and shape of the breasts and the nipples is symmetrical on both sides. Any asymmetry may be developmental; in such cases it is present since childhood.

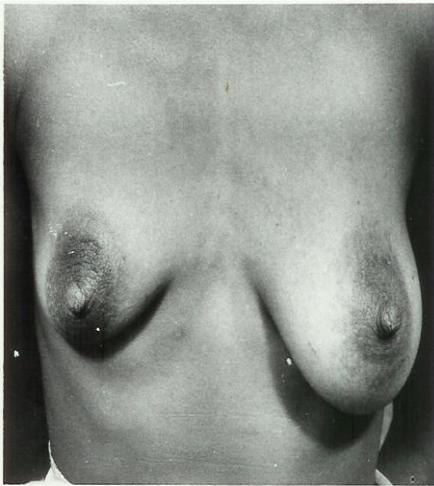
If there is any change in size and shape of the breast, overlying skin or nipple and areola invariably heralds an underlying serious pathology (5.1c, 5.1d).



5.1a



5.1b



5.1c



5.1d

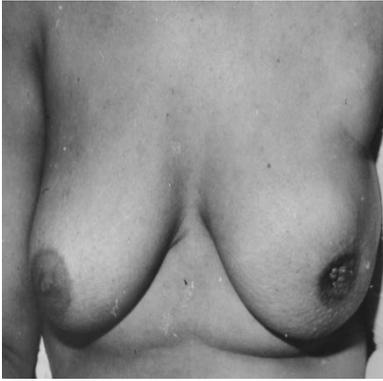
5.2 Breast [Contd.]

Recent retraction of nipple suggests underlying tumor, which is infiltrating the lactiferous ducts (5.2a).

Orange peel like appearance of skin overlying the breast is termed “Peaud’orange”. This phenomenon happens due to tumor infiltrating the intra glandular lymphatics, and oedema of skin between the attachments of Cooper’s ligaments (5.2b).

Dimpling or puckering of the skin is due to tumor infiltrating Cooper’s ligaments or the skin directly (5.2c).

Multiple hard nodules on or around the breast or on the chest wall after mastectomy, is due to cutaneous metastases or recurrences of breast cancer. This armor like skin appearance is called ‘Cancer en Cuirasse’ (5.2d).



5.2a



5.2b



5.2c



5.2d

5.3 Breast, Benign Lesions

Small cystic swelling on the edge of the areola is called ‘Cyst of Montgomery’ (5.3a).

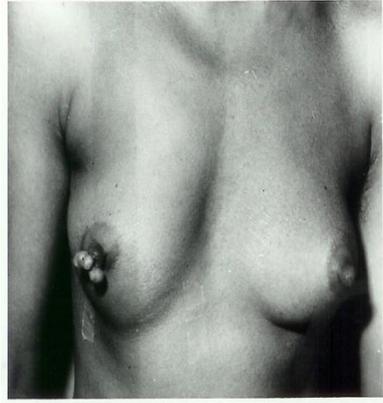
Small single or multiple swellings on the nipple are papillomas, which may bleed occasionally (5.3b). These have malignant potential.

Unilateral excoriating lesion of the nipple and areola is called ‘Paget’s disease’ (5.3c). This is serious and is an early manifestation of the underlying cancer. A biopsy is essential.

Bilateral excoriating lesion of nipples and areola is the eczematous condition of the skin and responds well to local medical applications (5.3d).



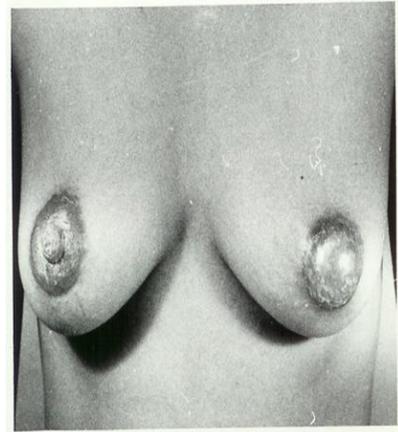
5.3a



5.3b



5.3c



5.3d

5.4 Breast Cancer

Carcinoma of the breast is the commonest malignancy in females and can present in many ways; such as unilateral elevation of breast (5.4a, 5.4b), unilateral change in size, visible and palpable swellings in the breast (5.4c, 5.4d).



5.4a



5.4b



5.4c



5.4d

5.5 Breast Cancer [Contd.]

‘Cystosarcomaphylloides’ (5.5a, 5.5b) is the term given to huge, invariably fungating breast masses. They look like ‘Sarcomas’; however the histology suggests their benign cystic nature. Usually these are giant soft fibroadenomas, which have broken down and ulcerated.

‘Inflammatory carcinoma of the breast’ is the term given to cancers in lactating breasts. It resembles acute lactating mastitis except that it does not respond to the treatment. A biopsy is essential. (5.5c)

Diagnosis of advanced cancer cannot be missed when patients present a picture like this (5.5d).



5.5a



5.5b



5.5c



5.5d

5.6 Breast Cancer [Contd.]

In many communities in developing countries, lesions of breast are allowed to advance to very late stage due to ignorance and natural shyness and reluctance, before medical help is sought.

Examples of ignored, advanced and fungating carcinomatous lesions of the breasts are seen in pictures (5.6a, 5.6b, 5.6c, 5.6d).

Earlier such proliferative lesions were called 'Encephaloid carcinoma' of the breast.



5.6a



5.6b



5.6c



5.6d

5.7 Breast Cancer [Contd.]

Some breast cancers were called ‘Scirrhus Carcinoma’ of breast earlier since they either grew in small atrophic breasts or the fibrotic element grew much more than the glandular tissues.

These tumors grow slowly and show better prognosis after surgery. (5.7a, 5.7b, 5.7c).

Locally advanced cancer may break down through skin before they produce distant metastases in lymph nodes or viscera. (5.7d).



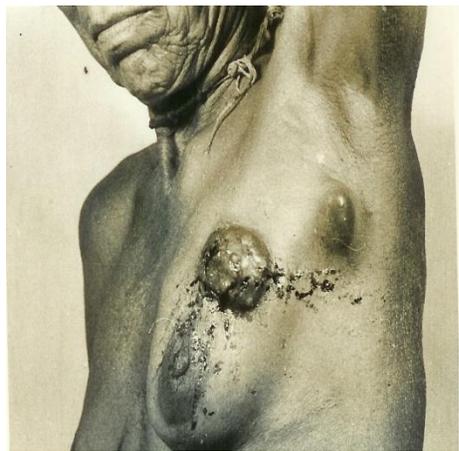
5.7a



5.7b



5.7c



5.7d

5.8 Breast Cancer [Contd.]

Some more patients of breast cancer are seen. (5.8a, 5.8b, 5.8c)

In large breasts, a tumor may continue to advance under the pendulous breast till it invades the skin. It is necessary to lift the pendulous breast and examine underneath, otherwise tumors may be missed. (5.8d)



5.8a



5.8b



5.8c



5.8d

5.9 Breasts in Males

Male breasts are not immune to breast lesions.

Eczematous changes or papillomas can occur on male breast nipple and areolas also (5.9a, 5.9b).

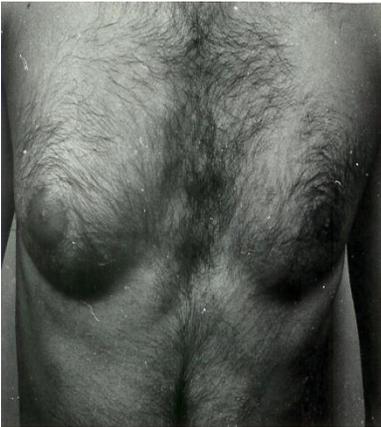
Commonest lesion is enlargement of one or both breasts called 'Gynaecomastia'. Bilateral gynaecomastias due to hormonal effects (5.9c), but unilateral must be investigated for underlying breast pathology, more likely to be cancer (5.9d).



5.9a



5.9b



5.9c



5.9d

5.10 Advanced Cancers

Most common mode of spread of breast cancers is by direct spread in neighboring tissues.

Lymphatic spread to the regional lymph nodes is the next common mode.

Blood-spread leads to blood borne metastases in lungs and in bones. Spines, cranial bones and long bones are the usual sites for bony metastases. Cranial metastases are usually osteolytic (5.10a, 5.10b).

Osteoblastic metastases in cranial bones usually come from the prostate gland in males, but rarely, they may also come from breasts in females and other glandular cancers like the thyroid, kidneys and lungs (5.10c).

Osteolytic metastases may lead to pathological fractures in long bones, such as the humerus (5.10d).



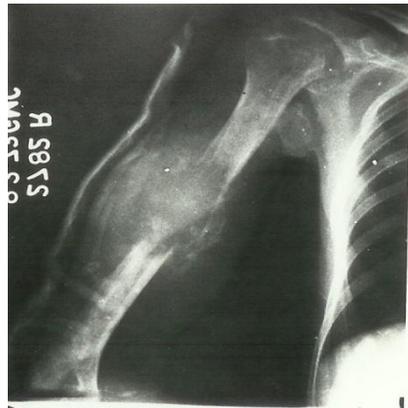
5.10a



5.10b



5.10c



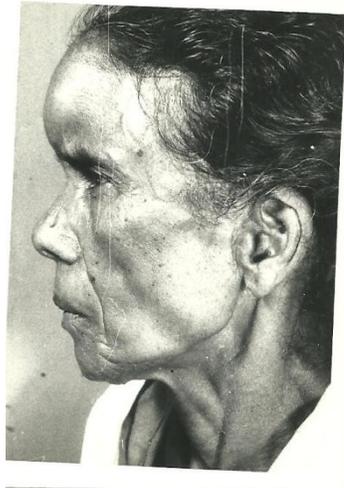
5.10d

5.11 Advanced Cancers [Contd.]

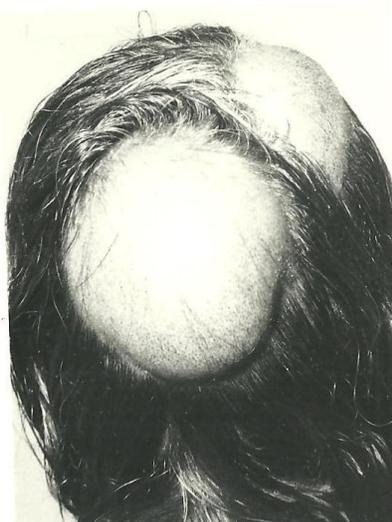
Another cause for skeletal metastases is thyroid cancer, which may be very small [Occult] and metastases may be the first presentation. Carcinoma of the lungs can also present with skeletal metastases. (5.11a, 5.11b, 5.11c, 5.11d)



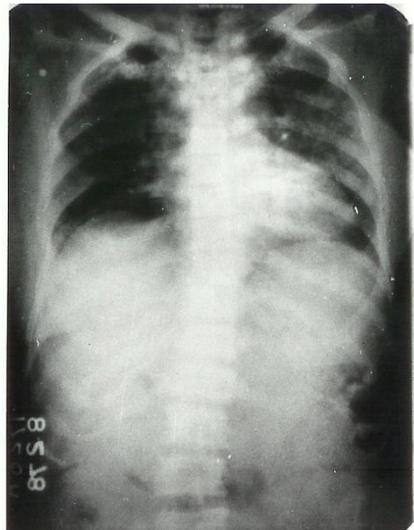
5.11a



5.11b



5.11c



5.11d

