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شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالأصل

BREAST CARCINOMA: AXILLARY LYMPH NODAL MICROMETASTASES; INFLUENCES, STAGING AND THERAPY.

Thesis
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MASTER OF SURGERY

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The patient is the center of the medical universe around which all our works revolve and towards which all our efforts trend in the fear of God.

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Breast carcinoma is the most common form of cancer in women. It is the leading cause of death among women 40 to 44 years old, and one of the leading causes death in 30 years old or more women.[1,2]

There are several independent but interrelated factors predicting for prognosis of breast carcinoma. Since the axillary lymph nodes are the major regional drainage for carcinoma of the breast, the prognostic significance of their metastases in patient with cancer breast requires no comment. [3,4]

Evidence continue to confirm that the single most significant indicator of prognosis in women with breast carcinoma is the presence or absence of metastatic carcinoma in axillary lymph nodes. This had supported the data from the National Surgical Adjuvant Breast Project (NSABP). [5-7]

Patients having histologically proved negative nodes have lower recurrence and higher survival rates than do those with tumor positive nodes. Also the status of axillary lymph nodes determines the future status of the patient and indicates the need for adjuvant hormonal therapy, chemotherapy and radiation therapy. [8]

THE BREAST

The breast is a highly modified sudoriferous (sweat) gland.[9]

EMBRYOLOGY:

The breast develops as ingrowths from ectoderm that form the alveoli and ducts. Supporting vascularized connective tissue is derived solely from mesenchyme. At the fifth or sixth week of fetal development, tow ventral bands of thickened ectoderm (mammary ridges or milk lines) are evident in the embryo.

These ridges are not prominent in the human embryo and disappears shortly thereafter except for a small portion that may persist in the pectoral region. Each primary bud of ectoderm initiates the development of 15 to 20 secondary buds. In the fetus, epithelial cords develop from the secondary buds and extend into the surrounding connective tissue of the chest wall. [9,10]

SHAPE,POSITON AND SURFACE ANATOMY:

The mature female breast is more or less hemispherical with distinct flattening above the nipple. It is located within the superficial fascia of the anterior chest wall extending from the level of the second or third rib to the infra-mammary fold at approximately the sixth rib. Transversely, it extends from the lateral border of the sternum to the anterior axillary or mid axillary line. The breast rests on portions of the deep investing fascia of

pectoralis major, serratus anterior and external oblique abdominal muscles and the upper extent of the rectus sheath.

The axillary tail (of Spence) extends superio-laterally into the anterior axillary fold deep to the deep fascia through the hiatus of Langer.

The nipple of an adult mature female assumes an elevated, prominent configuration. It points forwards, downwards, and outwards lying nearly over the fourth intercostal space. It is highly pigmented and surrounded by the areola which is less pigmented, [9-11](figures 1&2).

ANATOMICAL STRUCTURE:

The breast is composed of 15 to 20 lobes of glandular tissue of the branching tubulo-alveolar type. Each lobe terminates in a lactiferous duct, which opens into a narrow orifice at the summit of the nipple. Immediately under the areola, each duct has a dilated portion (the lactiferous sinus).

The duct is lined with stratified squamous epithelium, and shows a gradual transition to two layers of cuboidal cells, then a single layer of columnar cuboidal cells in the remaining duct system. Myoepithelial cells of ectodermal origin reside between surface epithelial cells in the basal lamina. In the secretory portion of the gland and in larger ducts, these cells contains myofibrils and are microscopically similar to smooth muscle cells.

Fibrous connective tissue connects the lobes of the breast and adipose tissue is abundantly interposed between the lobules. Subcutaneous connective tissue surround the gland and extend as septa between lobes

and lobules, providing structural support for the glandular elements. The deep layer of superficial fascia lies on the posterior surface of the breast adjacent to and at some points fusing with the deep (pectoral) fascia of chest wall. The retromammary bursa may be identified surgically on the posterior aspect of the breast between the deep layers of the superficial fascia and deep investing fascia of the pectoralis major muscle and contiguous muscles of the thoracic wall. Fibrous bands of connective tissue interdigitate between paranchymal tissue to extend from the deep layer of superficial fascia and attach to the dermis of the skin. These suspensory ligaments (of Copper) insert perpendicular to the delicate superficial fascial layers of the dermis and permit mobility of the breast while providing structural support.

The epidermis of the nipple and areola is highly pigmented and variably corrugated. Smooth muscle bundle fibers arranged radially and circumferentially in the dense connective tissue and longitudinally along the lactiferous ducts into the nipple. These muscle fibers are responsible for erection of the nipple, which occurs with various sensory and thermal stimuli.

The areola contains sebaceous, sweat, and accessory areolar glands. These accessory glands produce small elevations on the surface of the areola (Montgomery tubercles).[9-11]

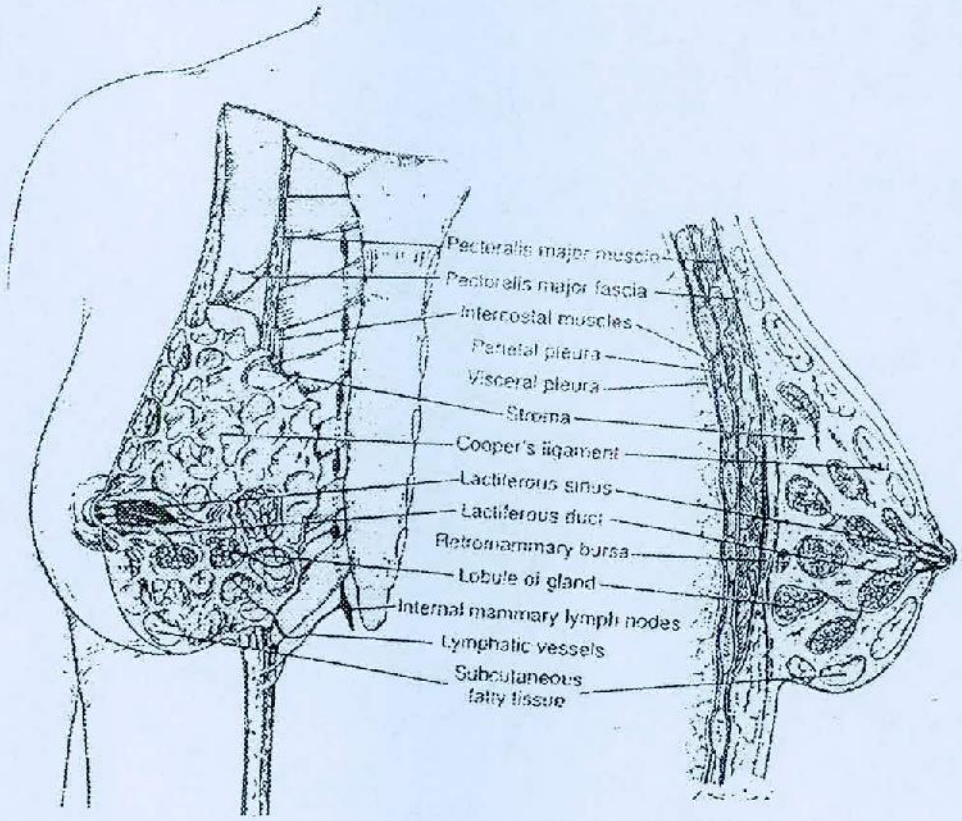

Figure 1. The anatomical structure, position, and relations to the anterior chest wall.