

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Notes on Breast Surgery

By

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Subjects Covered

- Surgical anatomy
- Investigations
- Benign & malignant breast disorders
- Breast reconstruction
- Screening for breast cancer
- Breast cancer genetics
- Male breast

Surgical anatomy of the breast

- Overlies 2nd-6th rib, extends from lat. border of sternum to ant. axillary line.
- 2/3 of it rests on pectoralis major, 1/3 on serratus ant., its lower med. edge overlaps the upper part of rectus sheath.
- Axillary tail: palpable in some normal cases, in few cases premenstrually or during lactation, if well-developed ↪ mistaken for a mass of enlarged L.Ns. or lipoma.

Structure of the breast

- The breast is a fibro-fatty-glandular organ.
- Lobule is the basic structural unit of gland.
- 15-20 lobules → lactiferous ducts → nipple.
- Lobules embedded in fat → smooth contour & most of bulk of breast.
- Lobules separated by fibrous septa (from S.C. tissues to fascia of chest wall) → ligaments of Cooper → dimpling of skin overlying carcinoma.

Blood supply of the breast

- Axillary A. → lat. Thoracic & acromioth.brs.
- Internal thoracic (internal mammary) A. → perforating brs. → 1st-4th I.C. spaces → med. edge.
- Intercostal As. → lat. perforating brs.
- Venous drainage → corresponding veins.

Lymphatic drainage of the breast

- Follows the pathway of its blood supply:
 - (1) Axillary L.Ns → along axillary Vs.
 - (2) Internal mammary L.Ns → along int. th. Vs. & lat. perforating brs. of I.C. Vs.
- Two lymphatic plexuses → subareolar plexus of Sappey (below nipple) & deep plexus (on pectoral fascia).

Axillary lymph nodes

- 20-30 in number, 75% of drainage of breast.
- Drain lymphatics of breast , pectoral region, upper abdominal wall & upper limb.
- 6 groups → ant.(pectoral), post. (subscapular), lat.(humeral), central (med.), interpectoral, apical(receive all other groups)
- apical L.Ns in continuity with supraclav. L.Ns → subclavian lymph trunk → great veins (direct, thoracic duct, jugular trunk).

Levels of the axillary nodes

- Level I → nodes inferior (lat.) to pectoralis minor (ant., post., lat. groups).
- Level II → nodes behind pec.minor (central)
- Level III → nodes above (med.) pec. minor (apical).
- Lymphatic spread (when interrupted by surg., RT, malig. deposits) → opposite br., opposite axilla, groin (lymphatics of trunk), cervical L.Ns., peritoneal lymphatics.



THANK YOU