MEDICAL EDUCATION RESOURCE

Lymphatic Drainage of the Breast

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Importance

- Most important clinically because **breast carcinoma spreads via lymphatics**.
- Careful understanding is essential for surgery (mastectomy, axillary clearance).

Lymphatic Drainage of the Parenchyma

1. Axillary Group (? 75%)

- Drains mainly **lateral and upper parts of breast** (especially upper outer quadrant and axillary tail).
- Pathway:
  - First to **anterior (pectoral) group of axillary nodes**.
  - Then to **central nodes ? apical nodes ? subclavian trunk ? venous angle**.
- **Clinical**: explains why axillary node involvement is common in breast cancer.

2. Parasternal Group (Internal Mammary Nodes)

- Drains **medial quadrants of breast**.
- Nodes along **internal thoracic (mammary) vessels**.

- Communicate with opposite side ? explains spread of carcinoma to **contralateral breast**.

3. Posterior Intercostal Nodes

- Drains **deep part of breast** (especially posterior region).
- Nodes along posterior intercostal vessels.
- Communicate with vertebral venous plexus ? explains **vertebral metastasis**.

4. Subdiaphragmatic and Subperitoneal Plexus

- Drains **inferior part** of breast.
- Communicates with **liver** ? explains frequent hepatic metastasis.

Lymphatic Drainage of the Skin of the Breast

- **Except areola and nipple**: drains into axillary, internal thoracic, and intercostal nodes.
- **Areola and nipple**: drained by a special **subareolar plexus of Sappey**, which communicates widely with parenchymal lymphatics.

Clinical Relevance

- **Carcinoma of breast** spreads mainly to axillary nodes ? early axillary dissection in surgery.
- **Peau d'orange**: obstruction of cutaneous lymphatics ? skin appears pitted like orange peel.
- **Nipple retraction**: fibrosis and lymphatic blockage around lactiferous ducts.

- **Contralateral spread**: due to communication via parasternal nodes.
- **Vertebral metastasis**: via posterior intercostal nodes and vertebral venous plexus.