



## ROMAN BRIDGES ARE BROKEN DOWN

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**ABSTRACT** **Background:** Cancer of the breast is the most common malignancy among women globally. From being fourth in the list of common cancers in India during the 1990s, it has now come up to the first position. Current trends show that a high proportion of the disease occurs at a younger age in Indian females, as compared to the west. The estimated number of incident cases in India in the year 2016 was 1,18,000. Approximately 50% of carcinomas arise in the upper outer quadrant, 10% in each of the remaining quadrants, and about 20% in the central or subareolar region.

## KEYWORDS :

**Case report:**

35 yrs, Female, a housewife by profession residing in a semi urban region of Jorhat had H/O, Pulmonary TB, 13 yrs ago, had feverishness, malaise body ache and pain on the right side of chest for 3 months along with lump in the right breast, for which she was given symptomatic treatment, was hospitalized for few days and was given pain killer, antibiotic, minerals and vitamin support, also had H/O progressive loss of weight, gradual weakness, loss of appetite. After that she was admitted at Jorhat Medical College and Hospital.

**Investigation:**

Hb 8.8 gm/dl with TLC – 6600 cells/cumm N 62% L 35% M 01% E 02% B 0%. ESR – 20 mm AEFH. Platelet – 1.4 lakhs/cu mm. PT – 12 sec, INR - 1 Sodium – 142.5 mmol/l, Potassium – 3.4 mmol/l, Chloride – 107.9 mmol/l, random blood sugar – 102 mg/dl, urea – 24 mg/dl, creatinine – 0.9 mg/dl, TSH – 4.07 uIU/ml, bilirubin total 0.9 mg/dl, s. bilirubin (direct) - 0.2 mg/dl, S. bilirubin (indirect) – 0.7 mg/dl, SGOT – 33 IU/l, SGPT – 22 IU/l, ALP – 67 IU/l, total protein – 9 gm/dl, albumin – 4.9 gm/dl, globulin – 4.1 gm/dl, HbsAg – negative, HCV – negative, HIV – Non reactive USG: Whole abdomen: Normal liver, gall bladder, CBD, pancreas, spleen, KUB region, pelvic organs. Mild inflamed appendix (acute appendicitis).

**USG: B/L breasts**

A lobulated hypoechoic irregular margined lesion in the right breast parenchyma at about 8 to 9 o' clock position showing necrosis and vascular flow – possibly represents BIRADS 4c (high suspicion for malignancy) lesion.

**CYTOLOGY:**

FNAC from swelling in right upper breast- upper outer quadrant Report- Smears show moderate cellularity, with presence of ductal epithelial cells arranged in loose cohesive clusters. Cells are pleomorphic with high N:C ratio, hyperchromatic nuclei, scant to moderate amount of cytoplasm. Background consists of red blood cells and few cyst macrophages.

Impression: Ductal Carcinoma of right Breast (Yokohama category V)

**HPE: Right breast tissue**

**GROSS EXAMINATION:** Received a specimen of modified radical mastectomy with attached skin and nipple areolar complex. It measures 22 cm x 12.5 cm x 4 cm in greatest dimension. Nipple areolar complex with skin flap measures 14 cm x 4.5 cm. Outer surface shows normal nipple areolar complex, fibrofatty tissue. On palpation of axillary fat 3 lymph nodes are palpable. Cut section shows a greyish to whitish mass measuring 4 cm x 3 cm x 2 cm. Distance of the mass from the medial margin is 8.5 cm. Distance of mass from the lateral margin is 11 cm. Distance of mass from superior margin is 1 cm. Distance of mass from inferior margin is 2 cm. Distance of mass from anterior margin is 1.5 cm. Distance of mass from deep resected margin is 0.2

cm. Sclerotic areas are also seen on cut section measuring 5 cm x 4 cm x 3 cm.

**MICROSCOPIC EXAMINATION:** Section from the tumour proper shows features of invasive ductal carcinoma of no special type (ductal), moderately differentiated (MBR score 3+3+1= 7) with extensive high grade ductal carcinoma in situ (solid) with central comedo necrosis. Tumour infiltrating lymphocytes seen. Microcalcification and vascular invasion present.

Nipple areolar complex is uninvolved by tumour cells.



**FIG: Gross; Modified Radical Mastectomy, Right Breast**

Deep resected margin is free from tumour cells.

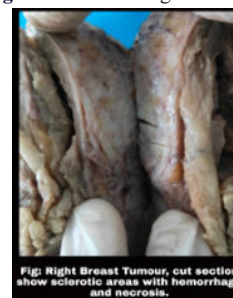
Medial, lateral, superior and inferior margin is uninvolved by tumour cells.

The 3 lymph nodes are free from the tumour cells.

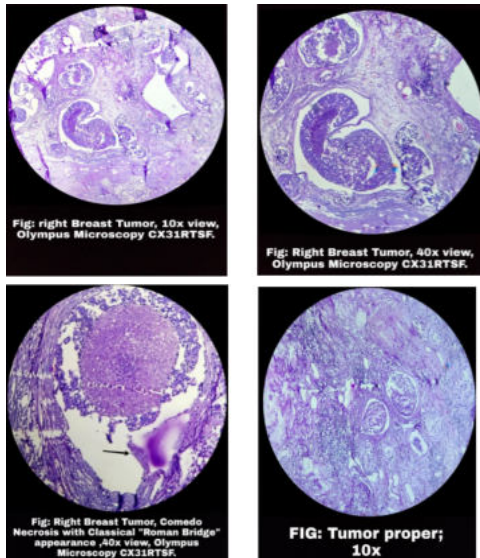
**IMPRESSION –** Moderately differentiated invasive carcinoma of breast of no special type (ductal), with extensive high grade ductal carcinoma in-situ (solid) of right breast [pT2N0MX].

**IHC:** Advised/Waiting

**Molecular profiling:** Advised/Waiting.



**Fig: Right Breast Tumour, cut section show sclerotic areas with hemorrhage and necrosis.**



**Discussion:** Prior to the current mammographic era, ductal carcinoma in situ (DCIS) usually presented as a large mass, was classified morphologically by architecture, and treated by mastectomy. The introduction of screening mammography led to an increase in the incidence of DCIS, a decrease in the average size of DCIS, and an increased emphasis on its heterogeneous nature. By definition, DCIS is a non-invasive clonal proliferation of epithelial cells originating in the terminal duct lobular unit, which would be expected to be monomorphic; however, it is the degree of nuclear pleomorphism that is primarily used to separate DCIS into low, intermediate, and high grades. Architecturally, DCIS has been divided into the following types: comedo, solid, cribriform, micropapillary, and papillary along with various other histological subtypes like 'Roman Bridging' type, which was the variant in our case.

Noninvasive carcinomas (carcinoma in situ) may be located within the ducts (intraductal carcinoma) or within the lobules (lobular carcinoma in situ). It is frequently associated with the erb B2/neu oncogene and a poor prognosis<sup>3</sup>.

Edwin R. Fisher et al in their study "Pathologic findings from the national surgical adjuvant breast project (NSABP) protocol B-17. Intraductal carcinoma (ductal carcinoma in situ)" has found the Roman Bridge type of Ductal Carcinoma in situ to be a rare entity<sup>4</sup>.

Paula.S.Ginter et al in their study Of "Indian files", "Roman bridges" and "Swiss cheese": Analogies in breast pathology has identified Roman Bridges as Classical entities in ductal carcinoma in situ building an analogy with the appearance of ancient stone bridges and curvilinear trabecular bars connecting two portions of the epithelial lining<sup>5</sup>.

Daniela Russo et al in their study "Low-Grade Intraductal Carcinoma of the Parotid Gland: A Case Report and Literature Review" demonstrated similar roman bridges in a case of low grade intraductal carcinoma of parotid gland showing pan-cytokeratin, protein S100, and SOX10 positivity<sup>6</sup>.

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