# *Unilateral Gynecomastia, a mimicker of male carcinoma breast-Comparison of mammography and sonomammography in patient presenting with lump in breast.*

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## *Abstract*

Over the past 25 years, the incidence of male breast cancer has risen 26%, from 0.86 to 1.08 per 100,000 populations. Multiple benign pathologies of male breast are reported out of which the most common is gynecomastia. Three mammographic patterns of gynecomastia have been described representing various degrees and stages of ductal and stromal proliferation. They are the nodular, dendritic, and diffuse glandular patterns. Early nodular gynecomastia is seen in patients with gynecomastia for less than 1 year. At mammography, there is nodular subareolar density. At US, there is a subareolar fan- or disk-shaped hypoechoic nodule surrounded by normal fatty tissue.

The zone of transition may be poorly defined and there is increased vascularity. Similarly chronic dendritic gynecomastia is seen in patients with gynecomastia for longer than 1 year. Due to fibrosis mammograms typically show dendritic subareolar density with posterior linear projections radiating into the surrounding tissue toward the upper-outer quadrant. At sonography, there is a subareolar hypoechoic lesion with an anechoic star-shaped posterior border, which can be described as “spider legs” insinuating into the surrounding echogenic fibrous breast tissue. This is the most difficult phase to diagnose an rule out carcinoma. The aim of the study was to differentiate between the most common benign condition which mimics carcinoma and carcinoma per se.

Method and Results: 16 patients of unilateral gynaecomastia were imaged by mammography and sonomammography in a period of 2 years. No patients with estrogen replacement therapy were included. 7 patients showed gynaecomastia at the early nodular phase and 9 showed the dendritic phase of disease. The mammographic radiological interpretation was done by 3 radiologists independently. FNAC based on 4 quadrant technique was done of all patients and 2 out of the 9 patients with dendritic phase of gynecomastia showed malignant cells. Tissue biopsy and mastectomy were done later with diagnosis of ductal carcinoma made in both cases. 12% of cases reporting for assessment of breast lump initially diagnosed as gynecomastia show ductal carcinoma.

Conclusion: Gynaecomastia is a great mimicker of carcinoma breast. Every case of unilateral gynaecomastia should be imaged with vigilance to rule out carcinoma. When in doubt 4 quadrant FNAC should be done preferably with sonographic guidance as part of screening. Early detection with targeted screening in men and screening in select high-risk individuals is a clinically actionable step at the patient level that could potentially improve individual outcomes..

### *Biography:*

Ghazal is currently working as a Consultant Radiologist at Pakistan Atomic Energy Commission General Hospital Islamabad for past five years. She specializes in radiology as well as in nuclear medicine. She has eight years of work experience in the field of nuclear medicine. Her interest is in interventional radiology and oncology.

### *Speaker Publications:*

1. “Incidental diagnosis of hiatus hernia on technetium-99m pertechnetate Meckel's scan”

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