

## Nebivolol Induced Gynecomastia

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### Abstract

Gynecomastia, defined as the presence of glandular breast tissue in men, is a common, typically benign physical exam finding during adolescence. The causes of gynecomastia can be physiologic, familial, pathologic, drug-induced or, in many cases, idiopathic. Side effects of drugs play a substantial role in the etiology of gynecomastia. We herein present the case of an 84-year-old male, who developed bilateral gynecomastia following Nebivolol use and complete regression after discontinuation of Nebivolol. Other reasons causing gynecomastia were excluded. Stopping the culprit drug is usually sufficient in treatment of drug-induced gynecomastia, with no need of any pharmacological or surgical treatment.

### Case Report

An 84 year old male known case of hypertension, Coronary artery disease-Single vessel disease, Post PTCA to RCA was on dual antiplatelets (Ecosprin and clopidogrel), statins, telmisartan and Nebivolol 2 mg once a day. He presented in opd with complaints of swelling in bilateral breasts for few months (Figure 1). Endocrinology and surgeon's consultation were taken. USG of bilateral breast bilateral subareolar hypoechoic area with finger like projections measuring 12 mm × 5 mm on right side and 11 mm × 6 mm on left side suggestive of gynecomastia (Figure 2). His FSH, LH and TSH, LFT and KFT's were within normal limits. Patient was not on any other drugs like spironolactone, digoxin which can also cause similar symptoms. His USG abdomen was unremarkable. Gynecomastia was thought to be due to Nebivolol. Nebivolol was stopped gradually in a span of 2-3 months gynecomastia had completely regressed.

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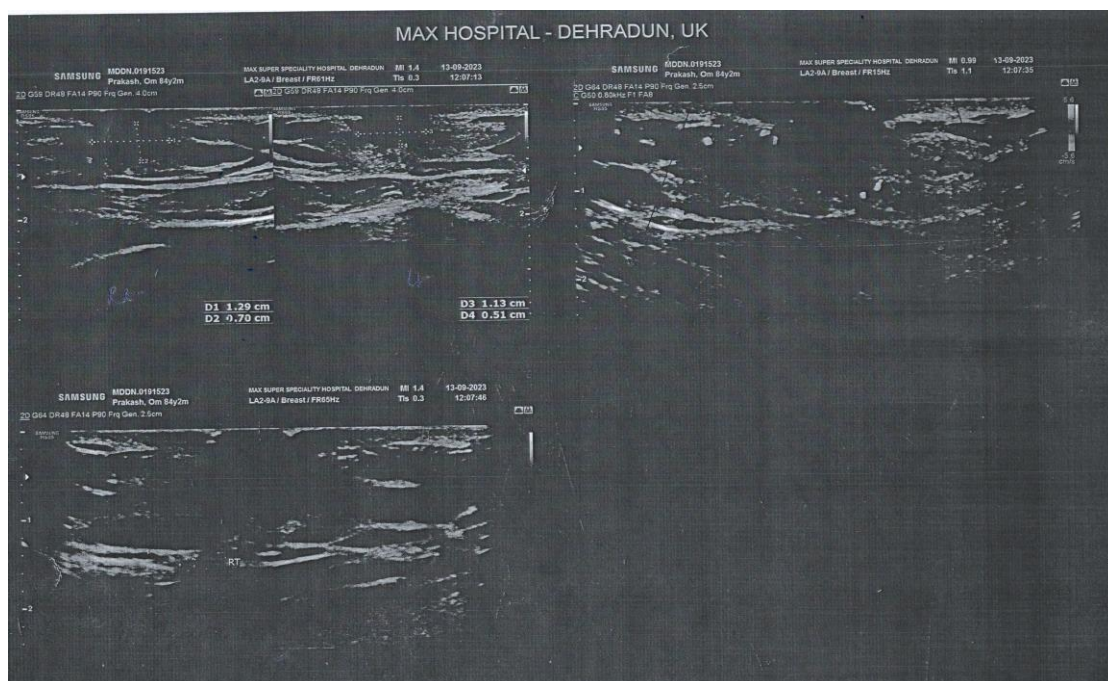
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**Figure 1:** Gynaecomastia



**Figure 2:** Ultrasound of B/L Breasts

## Discussion

Gynecomastia is characterized by enlargement of the male breast, caused by glandular proliferation and fat deposition. Although the exact pathogenesis of gynecomastia is unknown, it is likely due to a hormonal imbalance between estrogens and androgens. The causes of gynecomastia can be physiologic, familial, pathologic, drug-induced or, in many cases, idiopathic. Side effects of drugs play a substantial role in the etiology of gynecomastia.

Many cardiovascular drugs in clinical practice causing gynecomastia like Angiotensin-converting enzyme inhibitors, spironolactone, digoxin, amiodarone, verapamil, diltiazem, and nifedipine, has been reported in literature.

Medication-induced gynecomastia comprises of 10% to 20% of all gynecomastia. Nebivolol is a third generation beta-1 selective blocker commonly used for hypertension and systolic heart failure. Only few case reports of Nebivolol-induced gynecomastia has been reported in literature as an adverse effect (Nermin Bayer et al., J Pharmacol Pharmacother 2015, July-Sep). No case report has been found in Indian subcontinent.

## Conclusion

Nebivolol, a third generation beta-1 selective blocker rarely induces gynecomastia and discontinuation of drug can improve the condition.

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