

**A CASE REPORT OF UNILATERAL GYNECOMASTIA OF YOUNG ADULT WITH
HEPATITIS-B**¹*C. Pavithra and ²Dr. D. Nagaswetha¹Pharm D. Intern, Department of Pharmacy Practice, Krishna Teja Pharmacy College, Tirupati, Andhra Pradesh, India.²Assistant Professor, Department of Pharmacy Practice, Krishna Teja Pharmacy College, Tirupati, Andhra Pradesh, India.

Article Received on: 09/11/2024

Article Revised on: 30/11/2024

Article Accepted on: 20/12/2024



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Pharmacy Practice, Krishna Teja
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Andhra Pradesh, India.**ABSTRACT**

Gynecomastia, derived from the Greek words "gyne" (woman) and "mastos" (breast), refers to the abnormal enlargement of the male breast due to the proliferation of glandular tissue. Clinically, gynecomastia manifests as a benign, rubbery, or firm mass extending from the nipple, affecting one or both breasts, and can cause physical discomfort and psychological distress. It must be differentiated from pseudo-gynecomastia, which involves excess fat deposition without glandular proliferation, typically seen in obese patients. Gynecomastia is most common during periods of hormonal transition, such as puberty, and affects up to 65% of males, with bilateral presentation in 50% of cases. The primary etiology is hormonal imbalance, with increased estrogen activity relative to androgens. Other causes include liver disease, especially alcoholic cirrhosis, certain medications, and idiopathic factors. Diagnosis is confirmed through clinical examination, laboratory tests (e.g., hormone levels), and imaging, such as ultrasound and mammography, to rule out malignancy. Treatment options range from medical management (antiestrogens, androgens) to surgical intervention, especially in cases of long-standing gynecomastia or significant psychological impact. This case report presents a unique instance of a 23-year-old male with unilateral gynecomastia and Hepatitis-B, highlighting the diagnostic process and successful surgical management via mastectomy. The case underscores the importance of individualized treatment approaches in managing gynecomastia, particularly in patients with coexisting conditions.

KEYWORDS: Gynecomastia, Hormonal imbalance, Pseudo-gynecomastia, Estrogen, Androgens, Hepatitis B, Medical management, psychological distress, Individualized treatment.

INTRODUCTION

The term gynecomastia originates from the Greek words "gyne" meaning women and "mastos" meaning breast and describes a feminization of the male breast which involves excessive development of the male breast(s) with an increase in stroma, fat, or ductal tissue causes the volume of the male breast to grow due to proliferation of glandular tissue with the presence of a rubbery or firm mass extending concentrically and symmetrically from the nipple of one or both breasts, accompanied by histopathologically.^[1,2,3&4] It can be physically uncomfortable, psychologically distressing, anxiety, and may have a negative impact on self-confidence and body image and fear of breast cancer.^[5&6]

Gynaecomastia may be unilateral or bilateral, symmetrical or asymmetrical, Pain/tenderness (mastodynia) may or may not be present.^[7&8] Most typically, this illness manifests itself at periods of hormonal transition, such as childbirth, puberty, and old

age.^[3] It is the most common breast condition in males with a prevalence that varies widely between 32 and 65% of all disorders of the male breast according to factors like age, lifestyle etc and occurs bilaterally in 50% of patients.^[2&9] While bilateral gynecomastia is common in the neonatal period, early in puberty, and decreases with age and prepubertal unilateral gynecomastia is a rare condition, with only a few cases in literature.^[10]

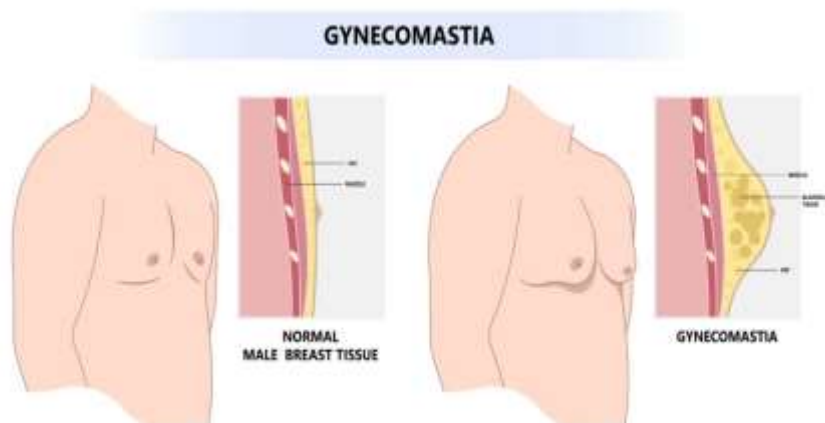


Figure 1.1: Shows the difference between Normal Breast and Breast with Gynecomastia.

Gynecomastia is a complex process resulting from many hormonal changes in the body.^[11] Most cases appear as result from an imbalance between estrogenic actions relative to androgenic actions at the level of breast tissue is believed to be the main etiology.^[6&11] Estrogens stimulate breast tissue growth, whereas androgens weakly inhibit it.^[6]

The causes of gynecomastia are multifactorial, 25% of all cases appear idiopathically.^[11] Among the underlying causes, 3 groups of triggers are distinguished: physiologic, pathologic and pharmacologic/toxic.^[11] Cirrhosis of the liver, especially alcoholic cirrhosis is commonly associated with gynecomastia.^[6] A number of factors may explain this link: alcohol can inhibit the hypothalamic-pituitary-testicular axis, leading to low serum testosterone levels; peripheral aromatization of androgens to estrogens increases in liver disease; SHBG levels are often elevated, causing a further decrease in free testosterone levels; and some alcoholic beverages contain phytoestrogens that may contribute to relative estrogen excess.^[6]

The diagnosis of GM by clinical examination through palpation followed by laboratory tests, and Imaging studies includes Imaging studies may include testicular sonography or thermography, computed tomography of the adrenal glands, magnetic resonance imaging of the sella turcica, and mammography.^[1&6] Due to the circadian rhythm of hormone secretion, laboratory monitoring must be performed in the morning at the time of maximum hormone release and GM must be confirmed histologically by a sonographically correlated core biopsy to exclude malignancy.^[11]

Gynaecomastia treatment should be individualized according to the patient's needs and expectations as well as the specific indication for surgery.^[7] Medical management options include antiestrogens (clomiphene, tamoxifen), androgens (danazol), and aromatase inhibitors.^[6] If medical treatment of gynecomastia is not successful then surgery is indicated for patients with gynaecomastia that does not regress spontaneously or,

with medical therapy, or causing considerable discomfort or psychological distress or is long-standing (beyond 18 - 24-months period).^[9] Different surgical options exist for gynecomastia including liposuction, limited access excision, skin sparing mastectomy, mastectomy with skin resection, and breast amputation with free nipple transfer.^[12]

We report a unique clinical presentation of an adult with unilateral gynecomastia and hepatitis-B.

CASE PRESENTATION

It is a case report on presentation, diagnosis, and management of a 23-year-old male with unilateral gynecomastia along with his clinical workup and surgical management.

PATIENT HISTORY

A 23-year-old male patient presented to the Department of General Surgery, Sri Balaji Medical College Hospital and Research Institute, Renigunta, complaining of a unilateral swollen breast for the past three years. The Patient reported aggravation of nipple tenderness and pain over the six months associated with swelling. There is no Galactorrhoea or any abnormal discharge. he did not have any history of breast malignancies or gynecomastia among the family members. He denied the use of drugs like steroids and topical applications which would otherwise lead to this clinical condition. Moreover, he was a social drinker (Intermittent Alcoholism of 5 Years) and smoker for the last 3 Years.

GENERAL EXAMINATION

Clinical Examination

The Physician Observed that the right breast was more predominant compared to the left. Examination was done on a Patient lying supine and hands were put at the back of his head to allow easy palpation of the breast tissue using the thumb and the fore Finger and found a rubbery, disk-like mass situated under the areola. This mass was Tender upon Palpation and mobile with an appropriate diameter of 3.5-3.0cm in diameter. The mass seemed to be concentric around the areolar area. There is no

palpable lumps or abnormal findings in the left breast. Secondary sexual characteristics in the patient appeared

to be well-developed and normal, similar to typical male development.

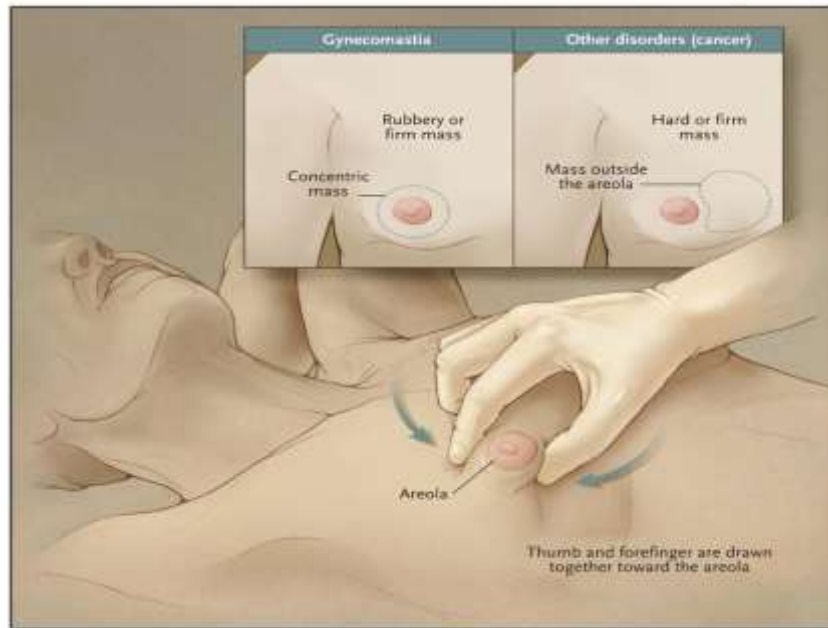


Figure 2.1: Describes the clinical examination of Gynecomastia.

LABORATORY AND IMAGING INVESTIGATIONS

- The patient underwent common laboratory tests such as full blood counts, liver function and kidney function tests, and coagulation parameters-all of which were within the normal limit. He was shown Hepatitis-B Positive from the serology. However, the patient condition with respect to his viral load and liver functions are well stabilized without any severe presentation of liver damage. Such a condition made him less dependent on Antiviral treatment at that moment.
- A Chest X-ray was done to evaluate the status of the intra-thoracic organs, and all were normal, thus

- discarding the possibility that it was a systemic disease caused by other organs. An Ultrasonography of the right breast was further requested to clarify the nature of the breast mass and it revealed that the right breast parenchyma mainly consist of fibroglandular tissue and there were no signs of inflammation or any pathological change. Normal findings from the nipple and the subareolar complex further reinforced the benign diagnosis.
- FNAC of the mass was also performed on this patient. The FNAC contained Adipocytes along with the cellular elements of blood. However, there is no relevant pathological change was evidenced to indicate malignancy or infection.

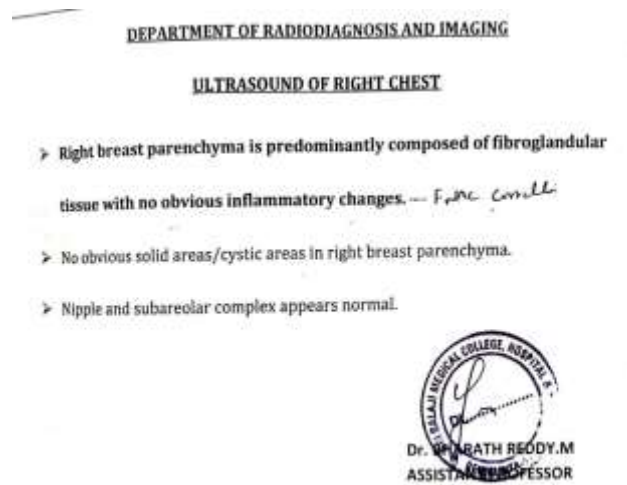


Figure 2.2 shows USG and Cytology Report of the patient.

DIAGNOSIS

Based on clinical findings, Ultrasound results and FNAC report, the patient was diagnosed with unilateral gynecomastia. Gynecomastia in males can be due to hormonal imbalances, medication use, or liver disease; however, no such underlying causes were found in this case. In the absence of other systemic signs or malignancy, the diagnosis of benign gynecomastia was made by the presence of a tender, mobile, fibroglandular mass beneath the areola.

MANAGEMENT AND SURGICAL INTERVENTION

The patient was provided with pharmacological management in the form of SERMs or aromatase inhibitors, which can be used to manage gynecomastia in certain cases, but he was very keen on surgical management. Since the patient is Hepatitis-B positive, special precautions were taken to avoid cross-contamination, and the patient was kept isolated from other patients during his stay in the hospital, thus minimizing the risk of transmission. The patient was evaluated to be fit for surgery by doing the necessary pre-operative evaluation such as Pre-Anaesthesia Checkup (PAC). He subsequently underwent a simple mastectomy of the right breast after receiving appropriate counselling. The Webster's procedure allowed the surgery to be conducted under general anaesthesia with Propofol as the anaesthetic agent.

The procedure was carried out in strict aseptic condition so as to minimize the infection risk especially considering the Hepatitis-B status of the patient. Mastectomy involved the removal of the enlarged breast tissue, including the disc-like mass under the areola, with very careful preservation of the skin and the nipple-areola complex.

POST OPERATIVE CARE

Postoperative recovery was uneventful. He had minimal pain at the surgical site that was well-controlled with analgesics. The surgical wound was clean, and there was no sign of infection or complications. He was discharged from the hospital on the fifth postoperative day with discharge medications, which included liver supportive drugs because he is a Hepatitis-B carrier.

The surgical wound healed well on follow-up visits, and there was no sign of recurrence or complication. The patient was back to normal activities within a week after surgery with no limitation in movement or function. He was given a Hepatitis-B vaccination as part of the standard care protocol.

DISCUSSION

This case report presents a 23-year-old male with unilateral gynecomastia and Hepatitis B, a relatively rare presentation. Gynecomastia, defined as a benign enlargement of male breast tissue due to hormonal imbalance, can cause significant psychological distress.

The patient's history revealed no drug use or familial predisposition, but occasional alcohol consumption and smoking were noted. Physical examination showed a tender, rubbery mass under the areola. The patient's Hepatitis B status, while stable, raises the possibility of subclinical liver dysfunction contributing to hormonal imbalances, as liver disease is a known factor in gynecomastia development. Diagnostic tests, including ultrasound and FNAC, confirmed benign tissue, and malignancy was ruled out. The patient declined pharmacological treatment and opted for surgical management through a simple mastectomy, leading to a smooth recovery. This case gives the need for thorough evaluation to exclude malignancy, highlights the potential influence of underlying liver disease, even in the absence of significant liver damage in gynecomastia, and highlights the psychosocial and physical relief that surgery can provide. Additionally, the patient's Hepatitis B status necessitated isolation and careful postoperative management, including vaccination, ensuring a comprehensive approach to his care.

CONCLUSION

The case highlights the rare presentation of unilateral gynecomastia in a young male with Hepatitis B. Despite the absence of significant liver dysfunction, the condition may have been influenced by subtle hormonal imbalances. Diagnostic tests effectively ruled out malignancy, and the patient opted for successful surgical management, leading to a smooth recovery. This case emphasizes the importance of careful evaluation and individualized treatment in managing gynecomastia.

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