

Bilateral gynecomastia: Case report

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Abstract

Gynecomastia, a benign enlargement of male breast glandular tissue, is the most common breast condition in males, often caused by an imbalance between estrogen and androgen activity. Although it is frequently observed during puberty and later stages of life, persistent prepubertal bilateral gynecomastia without associated endocrine abnormalities is rare. We report a case of a 24-year-old male presenting with a decade-long history of bilateral breast swelling. Clinical evaluation, ultrasonography, and fine-needle aspiration cytology confirmed the diagnosis of gynecomastia. The condition was managed surgically using liposuction combined with gland excision. Postoperative care included antibiotics, pain management, and nutritional support, facilitating a smooth recovery. This case underscores the significance of surgical intervention for long-standing gynecomastia, especially when cosmetic and psychological distress are present. Liposuction combined with gland excision remains an effective approach, ensuring minimal complications and optimal outcomes for adult males with persistent gynecomastia.

Keywords: Gynecomastia; Liposuction; Gland Excision; Cosmetic Outcome; Psychological Distress; Male Breast Condition

1. Introduction

Gynecomastia is characterized by excessive breast tissue in males and may be unilateral or bilateral. Bilateral gynecomastia is commonly observed during the neonatal stage, early puberty, and later in life. However, prepubertal bilateral gynecomastia without associated endocrine abnormalities is exceptionally rare, with only a few documented cases in the literature(1). Gynecomastia is clinically defined by the presence of a firm or rubbery, well-defined glandular tissue ridge located beneath the areola. It is symmetrical in shape, freely movable, and not attached to the overlying skin or underlying structures(2). Gynecomastia, the benign enlargement of male breast glandular tissue, is the most common breast condition in males, affecting at least 30% of men during their lifetime. It often leads to anxiety, psychosocial distress, and fear of breast cancer, prompting patients to seek early medical evaluation. Gynecomastia results from an imbalance between estrogen and androgen activity or an increased estrogen-to-androgen ratio, caused by increased estrogen production, decreased androgen production, or both. Its assessment requires a thorough medical history, clinical examination, targeted blood tests, imaging, and tissue sampling. Treatment is tailored to individual needs, ranging from reassurance to medical therapy or surgical intervention(3).

Gynecomastia can be identified during a routine clinical examination or when patients report symptoms such as a retro areolar nodule. The condition may arise sporadically or have a familial predisposition. It can present as unilateral or bilateral, be painful or painless, and may have an acute onset or display progressive growth(4) Mammography and ultrasound are both sensitive and specific for diagnosing gynecomastia and differentiating it from breast cancer. If clinical findings suggest malignancy or imaging results are inconclusive, histological confirmation is recommended(5).

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Treating gynecomastia requires a personalized approach. Care should be exercised to avoid large resections, as they are linked to higher complication rates. Routine histological analysis of tissue is essential in all true gynecomastia corrections, as it may uncover atypical cellular pathology(6). Various surgical techniques have been described, offering good outcomes, minimal scarring, and varying complication rates. Traditional excision of glandular tissue combined with liposuction delivers the most consistent results with a low complication rate. Pubertal gynecomastia can be effectively and safely treated with pharmacological anti-oestrogen therapy(7).

Surgical treatment of gynecomastia greatly enhances the quality of life for adolescents, leading to noticeable improvements in both physical and psychosocial well-being. After surgery, patients show performance comparable to individuals without the condition. This treatment has the potential to significantly benefit adolescents and young men, especially those who are younger, overweight or obese, or have moderate to severe gynecomastia. Patient age and body mass index should not be considered as standalone contraindications for surgery(8).

2. Case Report

2.1. Subjective Evidence

A 24-year-old male patient was admitted to Territory care Hospital with the chief complaint of bilateral breast swelling, which had been present for the past 10 years. The patient reported that the swelling had an insidious onset and gradually progressed in size over the years, but was not associated with pain, fever, or nipple discharge. Additionally, the patient experienced an asthma attack approximately 3-4 weeks ago. He does not have any significant comorbidities or a family history of similar conditions. The patient is an occasional alcoholic and has received two doses of the COVID-19 vaccine.

2.2. Objective Findings:

Upon admission, the patient's vital signs were stable, with a blood pressure of 130/80 mmHg, a pulse rate of 79 bpm, a respiratory rate of 18 cpm, and a body temperature of 98.4°F. On systemic examination, the patient was conscious, alert, and oriented, with normal speech.

On local inspection, increased breast tissue was noted in both breasts. The nipples were at the same level on both sides, with no other swelling observed. The nipple-areolar complexes were normal bilaterally. Palpation revealed no tenderness, no local rise in temperature, and the breast tissue was soft in consistency. There was no axillary lymphadenopathy.

Laboratory investigations revealed a normal complete blood count (RBC: 13.5 gm/dl, WBC: 10,000 cells/cumm, ESR 1st hour: 18 mm/hr) and normal blood sugar levels (88 mg/dl). The patient's blood group was AB-positive with Rh factor-positive.

Ultrasonography of the breasts suggested a diagnosis of bilateral gynecomastia. Furthermore, fine needle aspiration cytology (FNAC) of the right breast showed mature adipose tissue with no epithelial components, consistent with the features of gynecomastia.

2.2.1. Assessment:

Based on the subjective history, clinical findings, and diagnostic investigations, the patient was diagnosed with bilateral gynecomastia. The plan of care for the patient includes liposuction as the primary treatment for managing the bilateral gynecomastia.

2.3. Treatment Plan

Table 1 Preoperative Orders

S. No	Drug	Dose	Route
1	INJ TT	1/2 cc	IV
2	Injection Ceftriazone	1 gm	IV / STAT
3	Tab Pantopazole	40 mg	PO / STAT

4	NEB Duolin + Budecort	50 mcg + 500 mcg	Inhaler
5	Tab Amlodipine	5 mg	PO / STAT
6	Tab Metoclopramide	10 mg	PO / STAT

Preoperative Orders: Nebulization with Duolin and Budecort: 3 puffs once daily (OD). This plan aims to manage the patient's underlying condition while preparing them for surgery. Preoperative management includes respiratory support given the history of asthma.

2.3.1. Procedure Notes

Before the procedure, the patient was administered preoperative orders, including preparation of the parts below the neck and a scrub bath. The patient was kept Nil by Mouth (NBM) from midnight (12 AM) on the day of the procedure.

Under aseptic conditions, the patient was positioned supine. The surgical area was prepped and draped. A 0.5 cm incision was made on the right breast, and the incision was deepened.

Right Breast: An infusion cannula was inserted, and 250 mL normal saline (NS) combined with 1 injection of 100,000 mcg adrenaline was injected. Using an extraction cannula, approximately 275 mL of fat mixed with NS was suctioned.

Left Breast: 350 mL normal saline (NS) with an injection of adrenaline was injected. Using the extraction cannula, approximately 300 mL of fat mixed with NS was suctioned. Afterward, the right breast gland was excised and sent for histopathological examination (HPE). The skin was then closed using 3-0 Ethilon sutures.

2.4. Postoperative Orders

Table 2 Postoperative orders

S. No	Drug	Dose	Route	Frequency
1	Inj Monocef	1 gm	IV	BID
2	Inj Pantoprazole	40 mg	IV	OD
3	Inj Paracetamol	1 gm	IV	BD
4	Inj Tramadol	100 mg @ 100 mL NS	IV	As required (PRN)

The postoperative orders focus on preventing infection, managing pain, and providing supportive care.

2.4.1. Postoperative Care

The postoperative orders were followed for the first two days. On the third day, the medication regimen was adjusted as follows:

- Pantoprazole: The intravenous (IV) form was switched to oral 40 mg OD. Paracetamol: The IV form was replaced with oral 600 mg BD. Injection Moncef: The IV antibiotic was substituted with Tab Cefuroxime 500 mg PO BD.

2.4.2. Regarding diet and fluid management

On postoperative day 1, the patient remained Nil by Mouth (NBM) until further orders were given. On postoperative day 2, the patient was given a soft diet along with IV fluids (1 RL, 1 NS, 1 RL, 1 NS). On postoperative day 3, the patient transitioned to a normal diet.

2.5. Discharge Medications

Table 3 Discharge Medications

S. No	Drug	Dose	Route	Frequency
1	Tab Cefuroxime	500 mg	PO	BID
2	Tab Pantoprazole	40 mg	PO	OD
3	Tab Paracetamol	600 mg	PO	BD

These medications are prescribed to continue at home following discharge to prevent infection, manage pain, and maintain gastric protection.

3. Discussion

This case report details the diagnosis and management of bilateral gynecomastia in a 24-year-old male patient who presented to Territory care Hospital with a decade-long history of gradually progressive breast swelling. The swelling, which had developed insidiously, was not associated with pain, fever, or nipple discharge. The patient had a history of asthma but no other significant comorbidities or a family history of gynecomastia or related conditions. After clinical evaluation and imaging studies, including ultrasonography and fine needle aspiration cytology (FNAC), the patient was diagnosed with bilateral gynecomastia, with FNAC revealing mature adipose tissue without epithelial components.

Given the persistent nature of the condition and the absence of other systemic causes, the patient was managed surgically with liposuction as the primary approach. Preoperative measures included nebulization for asthma management, nil by mouth (NBM) status, and routine antibiotic prophylaxis to prevent infections. The surgical procedure involved liposuction with the use of a cannula to remove excess adipose tissue from both breasts, along with gland excision from the right breast, which was sent for histopathological examination (HPE). The procedure was successful with minimal complications, and the skin was closed with 3-0 Ethilon sutures.

Postoperatively, the patient received intravenous antibiotics (Monocef), pantoprazole for gastric protection, and paracetamol and tramadol for pain management for the first two days. On the third day, medications were converted to oral forms for easier administration. The patient was kept on soft diet and IV fluids postoperatively, with a gradual transition to a normal diet by day 3. He was discharged with oral antibiotics (Cefuroxime), pantoprazole, and paracetamol to continue his recovery at home.

The management plan highlighted the importance of surgical intervention, such as liposuction and gland excision, for persistent gynecomastia in adult males. Additionally, the patient's recovery was optimized by a well-coordinated postoperative care plan, including effective pain management, infection prevention, and nutritional support. Follow-up care was emphasized to monitor for potential complications, such as seroma or hematoma, and to ensure a satisfactory cosmetic outcome. This case underscores the role of surgical liposuction as an effective solution for cosmetic and emotional distress caused by persistent gynecomastia in adult males, with careful attention to both surgical technique and postoperative care leading to a successful outcome.

4. Conclusion

Bilateral gynecomastia, while often a benign and self-limiting condition, can cause significant cosmetic and psychological distress for affected individuals. Surgical management, such as liposuction and gland excision, remains the most effective treatment for long-standing or severe gynecomastia, particularly in patients who do not respond to medical treatments. In this case, the patient underwent successful liposuction with gland excision and has shown good postoperative progress. Proper postoperative care, including antibiotic therapy, pain management, and nutritional support, is essential for optimal recovery. The patient is expected to recover well with appropriate follow-up and discharge medications.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest.

Statement of ethical approval

This case report was carried out in compliance with the ethical standards set by our institutional research committee and in accordance with the 1964 Helsinki Declaration and its subsequent amendments. No experimental interventions were conducted as part of this case report.

Statement of informed consent

The patient gave written informed consent for the publication of this case report and any associated photos. All identifiable patient information has been omitted to maintain anonymity.

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