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Surgical management of accessory breast tissue: liposuction and mastectomy in axillary localization – a case series

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Summary

Supernumerary breasts are a rare congenital malformation that can cause physical and psychological problems such as pain, infection, bleeding and aesthetic discomfort. In this article, we present a series of cases with bilateral axillary supernumerary breasts who were treated with liposuction and mastectomy, with satisfactory results. We also discuss the different surgical techniques available for the treatment of supernumerary breasts and their respective advantages and disadvantages.

Key words

supernumerary breasts – accessory breast tissue – liposuction – mastectomy – axillary localization

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Introduction

Supernumerary breasts are a rare congenital malformation, occurring in approximately 6% of the female population [1], characterized by the presence of one or more extra breasts in addition to the normal breast, which may appear at any site along the breast line. Axillary supernumerary breasts are the most commonly observed and are often bilateral and asymmetrical [2]. Although benign, these supernumerary breasts can cause psychological and physical problems, such as pain, infection, discharge, bleeding, and significant cosmetic discomfort [2]. Imaging studies, such as ultrasound and mammography, can be helpful in confirming the diagnosis and ruling out malignancy [3].

There are several surgical techniques that have been recommended for the treatment of supernumerary breasts, including simple excision, exclusive liposuction, mastectomy, and the combination of liposuction and mastectomy [4]. Each of these techniques has its own advantages and disadvantages, and the choice of technique depends on the size, location, and distribution of the supernumerary breasts as well as the patient's preferences [5].

In this paper, we present a series of three patients with supernumerary breasts located in the axillary regions, who have been treated by liposuction and mastectomy, with satisfying results. We will also discuss the different surgical techniques available for the treatment of supernumerary breasts, as well as their respective advantages and disadvantages based on the current scientific literature.

Description of the cases

We present a series of three cases of patients with bilateral axillary supernumerary breasts. These patients are, respectively, 40, 35 and 30 years old, with no other pathological history. They consulted for two bilateral non- symmetrical axillary masses that appeared within 1–2 years. All patients mentioned an increase in their size with pain during the menstrual period. None of the patients reported pain, inflammation or flow.

The initial clinical examination noted the presence of two bilateral axillary masses in all three patients, well-defined, the larger one measuring 5 cm in long axis, soft consistency, painless to palpation, adherent to the skin but mobile relative to the deep plane, no areola or other masses located along the breast ridges.

Imaging studies, including ultrasound and mammography, showed no evidence of malignancy.

All our patients were treated by liposuction and axillary mastectomy under

Fig. 1. Patient with bilateral supernumerary breasts.

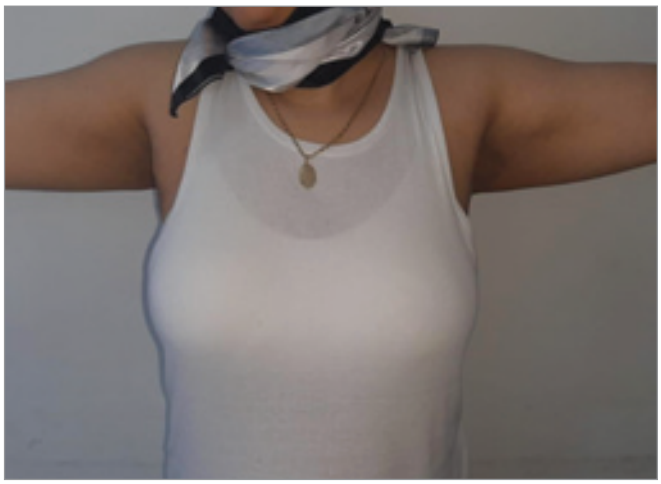

Fig. 2. Postoperative appearance after 60 days of recovery for the patient.

Fig. 3. Right side view.

Fig. 4. Left side view.

general anesthesia. First, a 0.3 cm incision was made in the normal area outside the masses respecting the tension lines in the axilla. Then, infiltration was performed as for the tumescent technique of liposuction.

The three patients in this study presented diverse clinical profiles that required tailored approaches.

Patient 1, a 32-year-old woman with no significant medical history and a normal BMI, exhibited bilateral ectopic breasts in the axillary region, characterized by predominantly fatty tissue and mild glandular components. The combined technique allowed for the effective removal of the ectopic tissue with minimal scarring, resulting in a smooth and aesthetically pleasing axillary contour.

As shown in Fig. 1, an axillary ectopic bilateral tissue type was found of predominantly fat with minimal glandular components in a disseminated fibrous stroma and she recovered well postoperatively with an excellent outcome and high satisfaction (Fig. 2).

Patient 2, a 41-year-old woman with a BMI of 31, presented with bilateral ectopic breast tissue This condition caused significant pain and restricted arm movement. The ectopic tissue in this case was primarily glandular, making liposuction alone insufficient. The combined technique was particularly effective, as liposuction reduced the bulk of the tissue and facilitated a smaller incision for the mastectomy. While her recovery period was slightly prolonged due to her BMI, she experienced significant relief from symptoms and improvement in arm mobility (Fig. 3, 4).

Patient 3, a 27-year-old woman with a slender build and no comorbidities, presented with glandular ectopic breast tissue and an asymmetrical distribution of adipose tissue. The combination of liposuction and mastectomy enabled precise glandular removal and contouring of the axillary area, creating a symmetrical and aesthetically pleasing result. Her

recovery was rapid and complication-free, with high levels of satisfaction reported both functionally and cosmetically (Fig. 5).

Liposuction was first performed to remove excess adipose tissue in the designated areas in all three cases. After that, an additional excision was performed to remove as much breast tissue as possible, using Metzenbaum scissors to dissect the tissue from the subcutaneous fat line. Finally, a skin spindle was traced to remove any remaining excess and achieve a better aesthetic result.

No drain was placed after a careful haemostasis check. A compression dressing of elastoplast type was placed after the operation, then the tissues were sent for anatomopathological study. The results of the histological study were without signs of malignancy for all our patients.

The combination of liposuction and axillary mastectomy resulted in a significant reduction in additional breast tissue with an improvement in aesthetics and a consequent decline in psychological discomfort in each patient. None of the patients experienced intraoperative or postoperative complications. The aesthetic results were evaluated as satisfactory by the patients after 2 years.

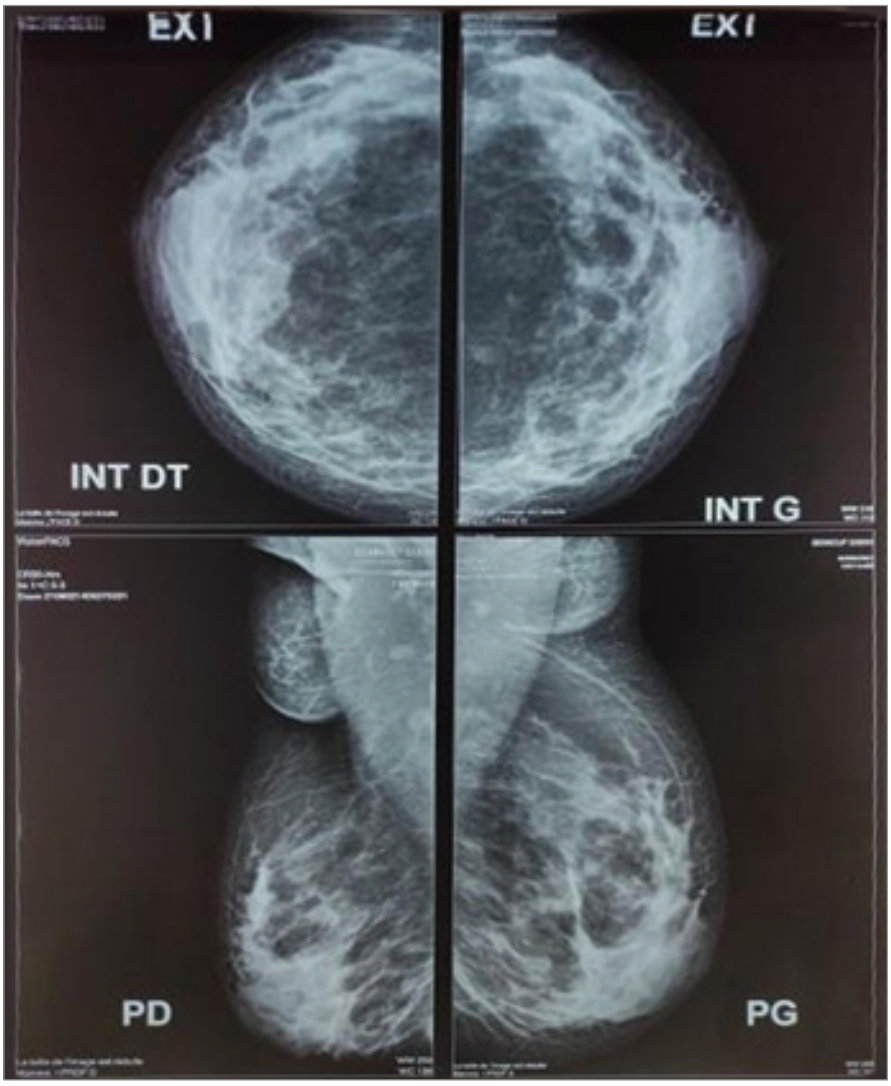

Fig. 5. Ultrasound (echo-mammo) of the patient's bilateral supernumerary breasts: additional breast tissues in the axillary region have a homogeneous appearance, with ultrasound features consistent with normal breast tissues. There are no suspicious masses, abnormal microcalcifications, or signs of abnormal vascularity that could suggest malignancy.

Discussion

In 1915, Kajava published a classification system for supernumerary breasts. Class I consists of a breast with nipple, areola and glandular tissue. Class II consists of a nipple and glandular tissue without areola. Class III consists of an areola and glandular tissue without nipple. Class IV consists of glandular tissue alone without nipple or areola. Class V consists of an areola and a nipple without glandular tissue (pseudomamma). Class VI consists of a nipple alone (polythelia). Class VII consists of an areola alone (polythelia areolaris). Class VIII consists of an area of hair only (polythelia pilosa) [6,7]. However, supernumerary breasts can be classified simply into three categories: mammary, polythelia and polymastia [8].

Supernumerary breasts can cause physical and psychological inconvenience, such as pain, discomfort, breast deformation, and embarrassment [9]. In some cases, supernumerary breasts can also cause health problems, such as infections, as well as an increased risk of developing breast cancer [10]. It should be noted that supernumerary breasts can be associated with complications, such as asymmetry, breast ptosis, chronic pain, infections, and the development of malignancies [11]. Therefore, a histological study is necessary, even in cases where there are no clinical and para-clinical signs of malignancy. Additionally, long-term follow-up of patients after surgery is recommended to ensure that there is no recurrence or complications [12].

It is important to notice that supernumerary breasts may be associated with congenital malformations such as Poland syndrome, which is characterized by lack of chest wall muscle development and upper limb abnormalities [3]. Therefore, comprehensive evaluation and continued surveillance is neces-

sary in patients with supernumerary breasts [14,15].

Various techniques have been employed to treat ectopic breasts, each presenting distinct benefits and challenges. Our study highlights the combination of liposuction and axillary mastectomy, which has shown promising results in addressing both functional and aesthetic concerns [16]. This discussion aims to provide detailed insights into the patient profiles, the rationale for combining the two techniques, and a comparison with alternative approaches.

Multiple strategies have been utilized to address ectopic breasts, each showing specific advantages and complications. In this paper, we demonstrate the efficacy of a newer approach to functionality and contours with an axillary mastectomy / liposuction combination. In this discussion we shall provide some detail on the patient profiles, rationale for the combination of both techniques and a comparison with other approaches [12].

The rationale for combining liposuction and axillary mastectomy lies in addressing the limitations of each technique when used alone. Liposuction is minimally invasive and effective at removing fatty tissue but often fails to excise glandular tissue completely, leading to a higher risk of recurrence. Mastectomy, on the other hand, ensures complete removal of glandular tissue but is more invasive, leaving larger scars and often requiring a longer recovery time [12]. By integrating these techniques, surgeons can achieve complete removal of glandular tissue with the added benefit of contouring through liposuction. This minimizes scarring, accelerates recovery, and improves aesthetic outcomes. Additionally, the combined approach facilitates histological analysis of excised tissue, which is critical for assessing malignancy risks.

To evaluate the advantages of the combined approach, it is important to compare it with other available methods. Liposuction alone is best suited for cases where fatty tissue predominates, but it is not effective for removing glandular tissue, resulting in a higher likelihood of recurrence. Mastectomy alone, while effective in excising glandular components, can leave visible scars and impact patient satisfaction, especially in younger patients concerned with aesthetics. Non-surgical options, such as hormonal therapy or observation, may be considered in asymptomatic cases, but they do not provide a solution for symptomatic or cosmetically distressing ectopic breasts. The combined approach thus stands out by offering functional relief and superior cosmetic results, making it a versatile option for many patients [17].

Despite its benefits, the combined technique is not without risks. Short-term complications such as seromas, infections, or delayed wound healing are possible but can be minimized with meticulous surgical technique and postoperative care. Long-term risks include residual asymmetry, scarring, or recurrence, particularly if glandular tissue is not entirely excised. In this study, none of the patients experienced significant complications, and histological analysis revealed no malignancy. However, regular follow-up is recommended to monitor for potential recurrence or long-term adverse effects.

Conclusion

In conclusion, the combination of liposuction and axillary mastectomy is a versatile, safe, and effective option for managing supernumerary breasts. Its ability to address functional symptoms while delivering excellent cosmetic results makes it an appealing choice for many patients. However, the small sample size and lack of long-term follow-up in this study limit the generalizability of our findings. Future research should include larger and more diverse patient populations, provide detailed demographic and clinical data, and conduct direct comparisons with other techniques. Long-term studies evaluating recurrence rates and patient satisfaction will further validate this combined approach as a standard of care for ectopic breasts

Roles of the authors

Doha Ar Reyouchi (primary author and corresponding author): conceptualization, methodology, and writing (original draft) – led the study design and drafted the initial version of the manuscript; Sara Saoud: data curation and writing (review & editing) – collected and managed data, and contributed to revising the manuscript; Mohammed Benlili: formal analysis and investigation – conducted data analysis and supported the investigation process; Ghita Charkaoui Belmaati: supervision and writing (review & editing) – provided overall guidance, critical revisions, and supervision of the research process; Ayat Allah Oufkir: project administration and supervision – managed the project and offered final approval of the manuscript.

Conflict of interest

The authors declare no conflicts of interest

Disclosure

The authors have no conflicts of interest to disclose. The authors declare that this study has received no financial support. All procedures performed in this study involving human participants were in accordance with ethical standards of the institutional and national research committee and with the Helsinki declaration and its later amendments or comparable ethical standards.

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