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Case Report

A rare case of unilateral axillary supernumerary breast^{☆,☆☆}

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ABSTRACT

Polymastia or supernumerary breast is an anomaly of the embryonic development of the mammary gland resulting in ectopic breast tissue. We report an exceptional case of a unilateral axillary supernumerary breast in a 71-year-old patient which became enlarged after menopause. The diagnosis was confirmed on anatomopathological study which revealed no sign of malignancy otherwise. In our case, it was a proliferation of glandular tissue, without areola or nipple, rarely reported in the literature, and corresponding to Kajava class IV. The patient underwent surgical treatment in order to resolve the problem of aesthetic discomfort and to limit the risk of malignant transformation.

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Introduction

Polymastia, or supernumerary breast, is a congenital condition corresponding to abnormally localized persistent mammary glandular tissue, usually along the milk line that extends from the armpit to the groin fold [1]. Polymastia is present in 0.4–6% of women and 1–3% of men [2]. Approximately 67% of Polymastia cases are located in the thoracic or abdominal parts of the milk line, often just below the infra-mammary fold; 20% are located in the axilla; the remaining sites along the milk line account for 20% [2]. However, in rare cases, Poly-

mastia can occur outside the milk line in the neck, face, arms or hips [3]. The unilateral character is also rarely reported [4]. Supernumerary breasts are mostly asymptomatic before puberty [5] and should be followed up regularly by radiology as they may undergo the same pathological changes that occur in the normal breast, such as mastitis, fibrocystic disease and even carcinoma [6]. We report an exceptional case of unilateral axillary localization of supernumerary breast, in a 71-year-old patient, which became enlarged after menopause and whose diagnosis was confirmed at anatomopathological study which did not reveal any signs of malignancy otherwise.

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Fig. 1 – Left axillary supernumerary breast (front view).



Fig. 2 – Left axillary supernumerary breast (side view) with a 4cm ulceration on its distal pole.

Observation

The patient is a 71-year year-old postmenopausal woman who is married and a mother of 6 children. She has been post-menopausal for 20 years. She has no relevant additional medical history. She reports that since her last pregnancy, which was thirty years prior, she developed a painless, unilateral, left axillary swelling that was initially small in size but has progressively enlarged over the last 5 years. It has also become painful with an area of ulceration along the distal pole of the area of concern.

Physical examination revealed a unilateral left axillary mass measuring 15 cm in long axis, soft, regular, mobile, without areola or nipple individualization with a painful ulceration of 4 cm at its distal pole.

Both breasts were without abnormalities and the axillary lymph nodes were not affected (Figs. 1 and 2).

The ultrasound (Fig. 3) revealed a large mass with an echostructure reminiscent of the breast. This mass had an in-

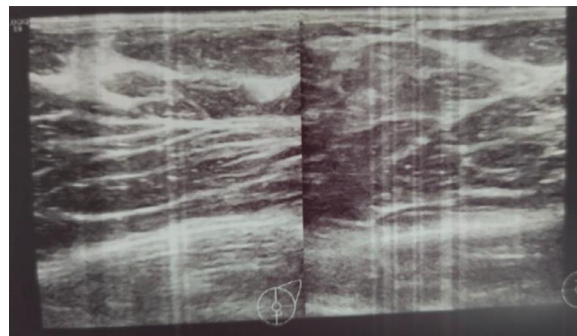


Fig. 3 – Ultrasound showing the structure of the axillary supernumerary breast.



Fig. 4 – Preoperative appearance of the supernumerary axillary breast.

filtration at the lower pole without any detectable nodule, and both breasts were classified as BIRADS 1 on both sides. A skin biopsy of the ulceration was performed revealing an ulcerated dermatitis with no stigmata of malignancy.

The patient underwent excision of the supernumerary breast (Figs. 4 and 5).

The histological study confirmed the diagnosis of supernumerary breast by showing adipose lobules without visualization of ducts, with the presence of a moderate polymorphic inflammatory infiltrate, and without signs of malignancy.

The postoperative follow-ups were simple (Fig. 6). The patient was discharged on day 2 postoperatively.

Discussion

The mammary glands begin their development early in the embryonic life. At five weeks of embryonic development, the ectodermal mammary striae extend bilaterally from the axilla to the groin (mammary ridge or milk line). At the 7th seventh week, a mammary ridge develops in the thoracic part of the primitive streaks and starts to proliferate as a primary mammary bud. This primary bud then grows into the underlying



Fig. 5 – Picture of the surgical specimen of the supernumerary axillary breast.



Fig. 6 – Postoperative photo.

dermis. At 10 weeks, the primary bud begins to branch, yielding secondary buds at 12 weeks, which eventually develop into mammary lobules. Further differentiation into a full breast occurs during the rest of gestation. The remaining mammary ridge usually regresses [7]. However, incomplete involution may result in foci of supernumerary breast tissue anywhere along this ridge [1]. The supernumerary breast can range from a subcutaneous focus of breast tissue to a full breast with areola and nipple. The presence of a small nipple is the most common form of supernumerary breast [8]. In 1915, Kajava published a classification system for supernumerary breast tissue that remains relevant today [9]:

Class I: complete supernumerary breast with nipple, areola and glandular tissue

Class II: presence of a nipple and glandular tissue but no areola

Class III: presence of areola and glandular tissue but no nipple

Class IV: presence of glandular tissue only

Class V: presence of nipple and areola, but no glandular tissue

Class VI: presence of nipple only (polythelium)

Class VII: presence of an areola only: polytheliaareolaris

Class VIII: presence of only a hair strand: polytheliapilosa

However, this classification has been simplified into Polymastia, polythelia and aberrant breast tissue [9]. In our case, it is a proliferation of glandular tissue, without areola or nipple, rarely reported in the literature, and corresponding to Kajava class IV.

It is an anomaly present from birth but usually discovered during pregnancy or lactation on the occasion of an increase in size, cyclical pain, discomfort, anxiety, milk secretion and local skin irritation [10]. The symptomatology of our patient was triggered during her last pregnancy by the appearance of a small painless left axillary swelling which paradoxically increased in volume only after menopause, making us fear a malignant degeneration which came back after anatomopathological study without any detectable tumor lesion, which underlines the extreme rarity of our case.

Clinically, misdiagnosis of axillary supernumerary breast is common in the absence of areola and nipple, leading to confusion with lipoma or adenopathy [2]. The use of imaging is an important step in the diagnostic and follow-up process.

On mammography, the axillary supernumerary breast has the typical appearance of mammary glandular parenchyma but is located in the axilla and separated from the normal breast [3,11]. The mass may also be evident on ultrasound, especially when it has a fibro-glandular component. In our case, the diagnosis was evoked at the clinical stage due to the volume and characteristics of the mass and confirmed by echo mammography which showed the same characteristics of a normal glandular tissue.

In the axillary supernumerary breast, all the pathologies that make up the ANDI (aberrations of normal development and involution) can develop, such as abscesses, mastitis, cyclic mastodynia, cysts, fibroadenomas, hamartomas, phyllodes tumors and carcinomas [12].

The most common site of supernumerary breast carcinoma is axillary: its incidence is 0.2% to 6% [13]. Its poor prognosis is probably due to the proximity of axillary lymphatics and lymph nodes [13]. The supernumerary axillary breast of our patient did not show signs of malignancy.

The treatment of choice for symptomatic supernumerary axillary breasts is surgical removal. The aesthetic aspect is the main indication in the majority of cases [14]. Down et al in a retrospective analysis of 28 patients who underwent surgical removal of supernumerary axillary breasts, also recommend surgery, despite the high complication rate reported (39%) [15].

However, for aesthetic approaches, liposuction is becoming a more commonly used therapeutic alternative [16]. It avoids the appearance of the central depression that is often left as a result of the remaining adjacent adipose tissue following traditional methods of resection of accessory breast tissue [6].

A new algorithm was proposed by the American Association of Plastic Surgery in 2011 for the treatment of axillary supernumerary breast using a combination of surgical excision and liposuction [13]. Regardless of the technique used, attempts to remove supernumerary breast tissue may result in surgical complications such as contour irregularities, lymphoceles, and possibly recurrence [6]. In our case liposuction was not possible given the voluminous size immediately indicating surgical excision.

Conclusion

Supernumerary breasts are not a common entity and can sometimes pose a problem of differential diagnosis, especially with lipomas. Surgical management is recommended to solve the problem of aesthetic discomfort and to limit the risk of malignant transformation.

Author contributions

All authors provided medical care for this patient. All authors were major contributors in writing the manuscript. All authors read and approved the final manuscript.

Patient consent

Obtained.

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