

## Fibroadenoma of the Right Axillary Supernumerary Mammary Gland: Case Report

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### Abstract

### Case Report

The supernumerary breast is an anomaly of breast development by excess of number, related to the persistence of vestigial structures outside the anterior thorax. This work is about a case of unilateral axillary mammary gland fibroadenoma. This is a 34-year-old patient who presented with a 2-year-old swelling, right axillary location. The diagnosis evoked by the clinicians was lymphadenopathy. The diagnosis of supernumerary breast fibroadenoma is made after histological examination of the specimen.

**Keywords:** Axillary Lymphadenopathy, Supernumerary Breast, Breast Abnormalities, Fibroadenoma.

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## INTRODUCTION

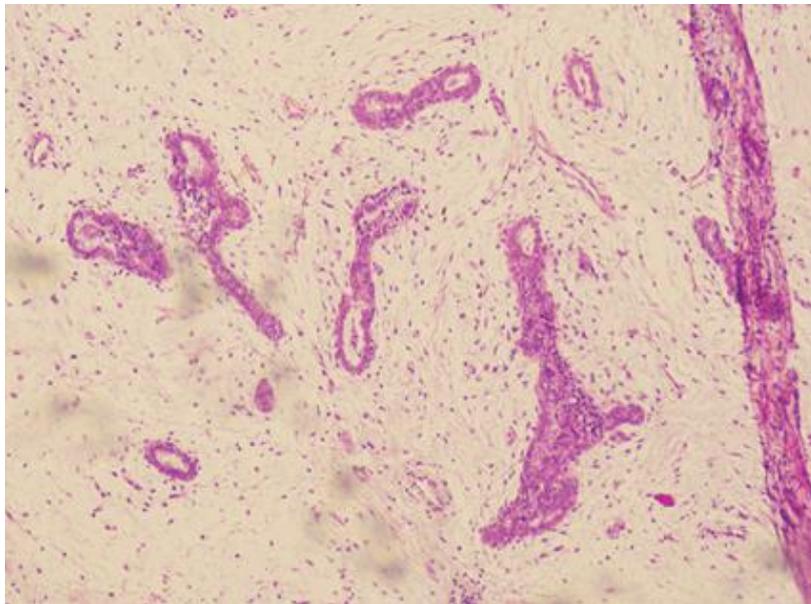
The supernumerary breast, is a congenital affection by excess of number corresponding to the persistence in abnormal position, of mammary tissue, which can be visible after the birth or appear at the time of the puberty, the pregnancy or the lactation. During embryological development the breasts differentiate into glandular structures and migrate to the anterior thorax. During this migration, some vestigial structures may remain in different anatomical points of the body, especially axillary, abdominal or even thoracic, which persist and grow, presenting themselves as visible or palpable structures. Its diagnosis is easy in case of presence of nipple and it becomes more difficult in their absence and/or in case of predominance of fatty tissue. It can also be the site of the same pathologies observed in normally located breasts [1]. Carcinoma is reported as the most frequent pathology, followed by inflammation and fibroadenoma [2]. We report a case of a girl who presented with a fibroadenoma in the right axillary polymastia for its rarity in order to emphasize the importance of considering the ectopic breast and its associated pathology in the differential diagnosis of axillary mass.

## OBSERVATION

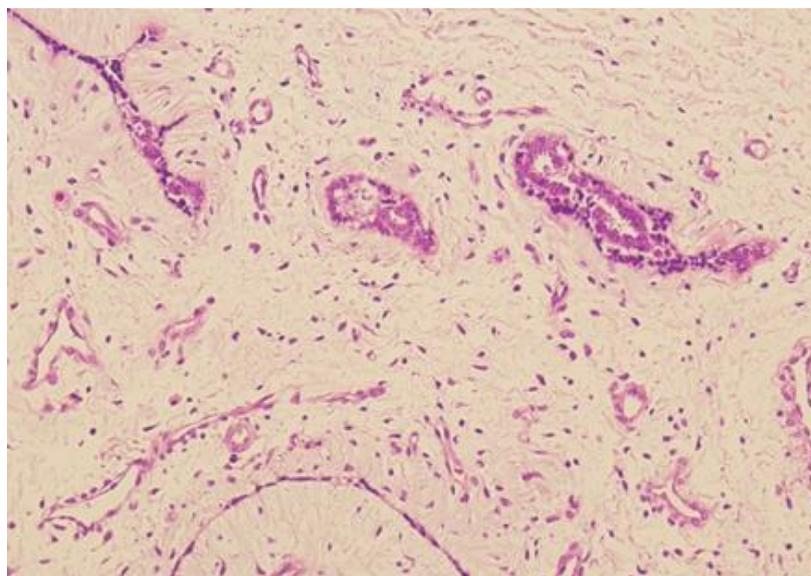
This is a 34-year-old patient, with no particular notable pathological history, who had presented right axillary swelling for two years, gradually increasing in volume. The physical examination noted the presence of a right axillary mass, well limited, measuring 3 cm in diameter, of firm consistency, painless on palpation, adherent to the skin but mobile with respect to the deep plane, without cutaneous modification opposite and without inflammatory signs (Fig 1). The remainder of the somatic examination was unremarkable, with general condition preserved. Ultrasound, indicated, revealed a hypochoic, oval and well-defined image in the right axillary hollow without any detectable nodular or cystic lesion and the biological assessment was completely normal. The clinical diagnosis of adenopathy was made, from which she benefited from a biopsy. The histological study of the biopsy concluded the Supernumerary Breast. A year later the patient underwent excision of the mass and the diagnosis of fibroadenoma was made. (Figs 2, 3 and 4).



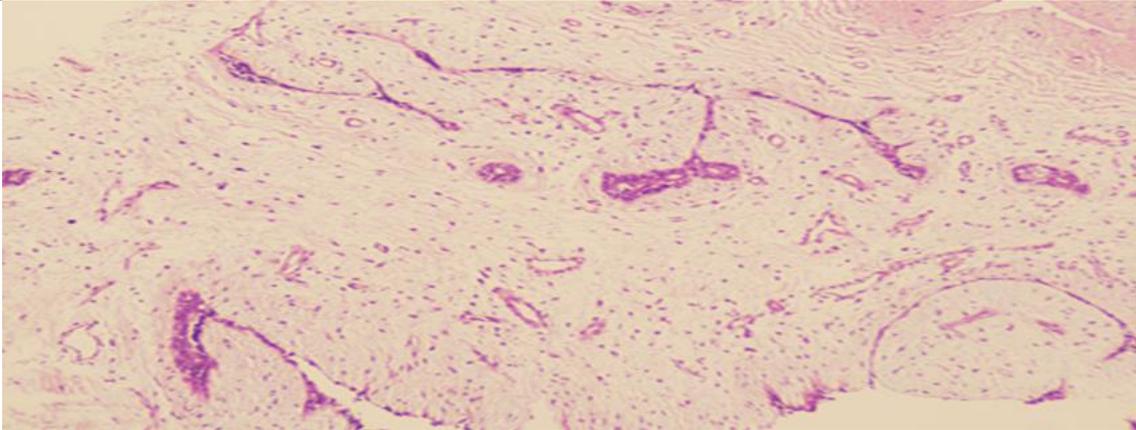
**Fig 1: Rounded, well-defined axillary swelling, with no adjacent skin abnormalities**



**Fig 2: Show the mammary ducts stretched on a mesenchymal tissue. HEx10**



**Fig 3: Show the mammary ducts stretched on a mesenchymal tissue. HEx10**



**Fig 4: Show the mammary ducts stretched on a mesenchymal tissue. HEx10**

## DISCUSSION

Embryological development consists of the growth and differentiation of structures of the human body in intrauterine life. At the 6th week of embryonic development, the mammary milk lines, which represent 2 ectodermal thickenings, develop along each side of the ventral surface of the embryo, extending from the axillary region to the groin fold [2]. Along this thickening, mammary buds appear in symmetrical pairs. However, on the extension of the mammary ridge, other buds may appear, the persistence of which leads to accessory or supernumerary breasts [3].

In 1915 Kajava published an ectopic breast tissue classification system that remains in use today. Class I consists of a breast with nipple, areola and glandular tissue. Class II includes the nipple and glandular tissue, but without the areola. Class III has areola and glandular tissue but no nipple. Class IV composed only of glandular tissue. Class V consists of nipple and areola, but no glandular tissue (pseudomamma). Class VI is composed of one nipple only (polythelia). Class VII has an areola only (polythelia areolaris). Class VIII consists of a tuft of hair only (polythelia pilosa) (4.5). Our patient is framed in class IV of Kajava.

The thoracic or abdominal location of the accessory mammary gland is the most referenced, occupying around 67%, along the milky line and 20% in the armpit [6]. On the other hand, in a study carried out in Madagascar, shows a clear predominance of the axillary localization 7 out of 8 cases [1]. With regard to laterality, the supernumerary breast is often unilateral, which is found in 6 series of cases in this study [6]. In our case, the location of the supernumerary breast is axillary and unilateral right.

Men and women have an overall equal incidence, but differences are observed within ethnic groups [7]. Familial cases have been reported, 6 to 11% and the hypothesis of autosomal dominant genetic

transmission [1]. In our case, he does not have family relations.

The supernumerary breast is present from intrauterine life, to result from the abnormality of embryological development, but rarely described in children. Generally it manifests after puberty, during pregnancy or lactation, due to the increase in hormonal secretion which plays the role of stimulator leading to an increase in the volume and sensitivity of the gland [6]. In our case the presentation is noticed after the age of 30 years.

The bilateral and symmetrical nature of the axillary location, mobility in relation to the deep plane and not the superficial plane, and a transient increase in volume during pregnancy and lactation are the main clinical characteristics that point towards accessory axillary breasts [8]. Their diagnosis remains difficult in the absence of nipple and breast engorgement during lactation and gestation, which explains the frequent confusion of this anomaly with lipomas and axillary adenopathy [9]. In our case, the swelling is unilateral adherent to the superficial level and not to the deep, painless, presenting neither areola nor nipple whose clinical diagnosis evoked was lymphadenopathy.

Regarding imaging, the breast is made up of connective and glandular tissue which shows hyperechogenicity on ultrasound, and adipose tissue which is hypoechogenic [8]. The predominance of adipose tissue in the supernumerary breasts can often impose a diagnosis of lipoma on ultrasound [6]. Supernumerary breasts can be the seat of normal breast pathologies. Cases of mastitis, fibro-cystic changes, fibroadenomas, phyllodes tumors have been reported, but the most important complication to consider is the appearance of cancer in this ectopic breast tissue [4]. This complication is the most common, followed by inflammation and fibroadenoma [2]. Our case developed fibroadenoma.

The supernumerary breast can be associated with other embryological anomalies or even be the revealing phenomenon of these anomalies. Cases of

associated urinary malformations are the best known. Some authors recommend the systematic search for these urinary malformations by performing an ultrasound of the urinary tree, while others only look for them when they are symptomatic. The others are incidentally vertebral anomalies (spina bifida, scoliosis), anomalies of the cardiovascular system, pathologies of the central nervous system, gastrointestinal, skeletal and cutaneous diseases [10]. Our patient does not show abnormalities of the cardiovascular and urinary systems.

The disagreement persists between the authors as to the therapeutic management in the case of normal mammary glandular tissue. Some authors recommend abstention except for complications, others opt for systematic excision for aesthetic reasons and also to prevent complications such as malignant degeneration [6]. This treatment was based a few years ago on surgical excision with many adverse effects such as unsightly scars, lymphedema, residual breast tissue. Currently, modern treatment is based on liposuction alone or after surgical excision according to the algorithm published by the American Society of Plastic Surgery [10]. Our patient underwent excision of the mass one year after the diagnosis of supernumerary breast by biopsy.

**Conflict of Interest:** No conflict of interest has been declared.

## CONCLUSION

The supernumerary breast is a sporadic or familial congenital condition that usually manifests during puberty, pregnancy or lactation. Axillary localizations often pose diagnostic problems with axillary lipoma or adenopathy. The confirmatory diagnosis is histological. Surgical excision is the appropriate therapeutic approach, both aesthetic and therapeutic.

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