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Case Report

Symptomatic Accessory Nipple in an Adult Female - A Biopsy Depth Consideration

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Abstract

Supernumerary nipples (polythelia) are rare congenital anomalies with the potential to include glandular breast tissue and exhibit pathological changes. We report the case of a 31-year-old woman with bilateral accessory nipples since birth, who presented with new-onset tenderness of the left lesion. Excision biopsy confirmed nipple-like architecture but was inconclusive regarding deeper mammary elements due to limited sampling depth. This case raises the need for careful biopsy planning when evaluating symptomatic accessory nipples.

Keywords: accessory nipple, polythelia, ectopic breast tissue, excisional biopsy, histopathology

Introduction

Polythelia refers to the presence of supernumerary nipples along the embryonic mammary ridge and is often an incidental, asymptomatic finding. While these structures are frequently dismissed as cosmetic variants, they may harbor glandular tissue capable of benign or malignant transformation, and require clinical evaluation when symptomatic (Fama' et al., 2007). Histologically, they can mirror normal breast components, including ducts and smooth muscle, but the full extent is often only visible with adequate tissue depth (Mehregan, 1981). This report describes a symptomatic adult female with polythelia and explores the diagnostic implications of superficial biopsy.

Case Presentation

A 31-year-old woman presented to clinic with a three-month history of mild tenderness and discomfort in the region of a long-standing accessory nipple located just below the left breast. The lesion had been present since birth and was part of a bilateral presentation, with the left side always more prominent..She denied discharge, pruritus, or rapid enlargement. Her menstrual cycles were regular, though she reported untreated menorrhagia over the preceding year. Obstetric history included one term pregnancy (G1P1C1), with three years of breastfeeding. There was no known history of hormonal disorders.The lesion had been present since birth and was part of a bilateral presentation, with the left side always more prominent..She denied discharge, pruritus, or rapid enlargement. Her menstrual cycles were regular, though she reported untreated menorrhagia over the preceding year. Obstetric history included one term pregnancy (G1P1C1), with three years of breastfeeding. There was no known history of hormonal disorders.

She had no prior evaluation for the accessory nipples but was prompted to seek care due to recent tenderness and a family history of breast cancer in a paternal aunt. Examination confirmed a raised, pigmented lesion just inferior to the left breast fold, consistent with polythelia.

An excisional biopsy was performed. The specimen measured 14x7x6 mm, with a central 5x4x2 mm raised area. Histological examination revealed elongated rete ridges, smooth muscle bundles, lactiferous-type ducts with sinuses, and mild chronic inflammation - features consistent with accessory nipple architecture. Although histological features consistent with an accessory nipple were identified, assessment of underlying glandular parenchyma was limited due to the superficial extent of the excised specimen.

Discussion

The clinical significance of polythelia is often underappreciated, particularly when asymptomatic. However, supernumerary nipples have been shown to undergo fibroadenomatous and neoplastic changes similar to those of normal breast tissue, and cases of carcinoma arising in accessory nipples have been documented (Bruele and Gemignani, 2020).).In one 20-year single-center study, ectopic breast tissue was found in a small but significant subset of patients, and histological analysis revealed several cases of fibrocystic disease and neoplasia (Famá et al., 2016.

Histological analysis remains the diagnostic gold standard, but its accuracy depends on adequate tissue sampling. As demonstrated in this case, superficial biopsy may confirm epidermal and ductal structures but fail to identify glandular elements. Mehregan (1981) noted that accessory nipples often include subcutaneous mammary glands, which are only revealed when deep excision is performed.

Given the anatomical and pathological variability, full-thickness excision is advisable in symptomatic cases or those with risk factors for malignancy. Clinicians should be aware that accessory nipples are not merely dermal lesions and should be approached with the same vigilance as orthotopic breast tissue when symptomatic (Fama' et al., 2007).

Conclusion

This case underscores the importance of adequate biopsy depth in the evaluation of symptomatic accessory nipples. While superficial samples may confirm epidermal and ductal components, deeper sampling is often necessary to assess for glandular tissue or pathological changes. Excisional biopsy remains the preferred approach in such presentations, particularly when there is clinical concern or relevant family history.

Declarations

None

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Consent for publication

Informed written consent for publication and accompanying images was obtained from the patients prior to collecting information.

Availability of data and material

All data generated or analyzed during this study are included in this published article.

Competing interests

The authors declare that they have no competing interests.

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