



Case Report

Accessory Nipple on the Sole of Foot: A Case Report

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ABSTRACT

This case report presents a rare occurrence of an accessory nipple on the sole of a 7-month-old female patient's right foot. The patient was presented with a well-formed nipple surrounded by areola, measuring 2.5×2.5 cm in diameter. Following surgical excision, histopathological examination confirmed the absence of glandular tissue. This case is classified within the fifth category according to Kajava's classification, signifying the presence of nipple and areola without glandular tissue. The report discusses the clinical presentation, diagnostic assessment, and implications of foot accessory nipples, emphasising the importance of informed consent and awareness of potential changes in such cases.

Keywords: Supernumerary nipple, Accessory nipple, Ectopic nipple, Breast anomalies, Congenital anomalies, Foot.

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INTRODUCTION

Supernumerary nipples, exceeding the usual two found on the chest, are relatively common congenital anomalies occurring in 1-5% of individuals. Typically residing along the embryonic milk lines extending from the axilla to the groin, their significance often lies primarily in the realm of cosmetic concerns¹. However, our case report unveils a rare outlier, an ectopic nipple gracing the sole of our patient's foot, a phenomenon documented but sparsely understood.

While seemingly inconsequential, aberrantly located nipples, whether accompanied by underlying glandular tissue or not, may mirror the pathological processes affecting normal breast tissue^{2,3}. Therefore, a thorough physical examination coupled with a keen awareness of these associations becomes paramount in comprehensively ruling out potentially serious underlying pathologies.

Intriguingly, the precise reason for supernumerary nipples venturing beyond the embryonic milk lines remains shrouded in mystery. Current scientific understanding

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provides no definitive explanation for this anomalous positioning⁴.

By weaving together established knowledge with the intrigue of our unique case, we can illuminate the multifaceted reality of supernumerary nipples. While often dismissed as purely cosmetic curiosities, their presence, especially in atypical locations, warrants a vigilant eye. Through meticulous examination and awareness of potential systemic connections, we can unravel the secrets these fascinating deviations hold, leading to better diagnosis and care for individuals exhibiting them.

CASE REPORT

A 7-month-old female infant was admitted to the department of orthopaedics at Jalalabad Ragib-Rabeya Medical College Hospital, Sylhet, with a painless bulge of sole skin in the plantar region of her right foot. On examination, a well-formed nipple surrounded by areola, measuring 2.5×2.5 cm, was identified in the plantar region. No palpable nodes were present, and the remaining physical examination, including the mammary line, was normal. Laboratory tests returned with normal findings.

Following informed consent, surgical excision was performed, and the excised tissue was submitted for

histopathological examination which revealed fibroepithelial like tissue. On 3rd post-operative day, the patient was discharged with instructions for follow-up. During follow-up the patient's condition was uneventful.

DISCUSSION

This case report highlights the exceptional rarity of accessory nipples located on the sole of the foot, representing one of the few documented instances in medical literature. Histopathological examination revealed the presence of a fibroepithelial polyp, with the accessory breast tissue closely resembling the structural composition of human breast tissue. These foot nipples often bear close resemblance to their chest counterparts, displaying a raised

bump, pigmentation, and even hair follicles in some cases. While glandular tissue and lactation from foot nipples are exceedingly uncommon⁵, this possibility cannot be entirely disregarded.

Kajava's classification for supernumerary breast tissue (SBT) proves valuable in categorising this unique presentation⁶. Our case falls into category V, signifying the presence of both nipple and areola in the absence of underlying breast glandular tissue. Notably, polythelia (nipple only) and pseudomamma (nipple and areola with fat tissue) are recognised as the most frequent forms of supernumerary nipple and tissue (SNT).

The aetiology of SBT remains largely obscure, with sporadic occurrences predominating. However, familial



Figure-1(a), 1(b): Accessory nipple on the sole of foot.

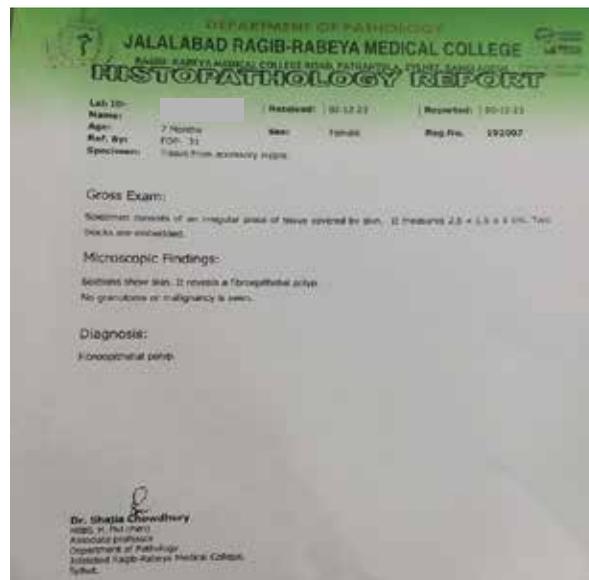


Figure-2: Histopathology report of accessory nipple.

cases with autosomal dominant inheritance and incomplete penetrance have been documented. The prevalence of supernumerary nipples varies geographically. The prevalence is 0.22% in a Hungarian population, 1.63% in African American neonates, 2.5% in Israeli neonates, 4.7% in Israeli Arabic children and 5.6% in German children. Interestingly, the observed sex distribution for SBT appears nearly equal, with some studies suggesting a slight male prevalence (male-to-female ratio 1.7:1)⁷.

While isolated SBT often pose no complications, ectopic breast tissue holds the potential to mimic the pathological processes affecting normal breast tissue⁸. Inflammatory and neoplastic conditions, including mastitis, abscess formation, cysts, adenomas, fibroadenomas, carcinomas, melanomas, and Paget disease, warrant heightened vigilance⁹. Reassuringly, the malignant potential of ectopic breast tissue appears comparable to normal breast tissue, suggesting similar management strategies might apply¹⁰.

Informed consent serves as an essential ethical consideration when contemplating the publication of patient details and accompanying images. Parents or patients should be thoroughly informed that supernumerary nipple and tissue (SNTs) are typically benign lesions in otherwise healthy individuals. Nonetheless, awareness regarding potential changes associated with physiological development during puberty or pathological conditions remains crucial. Open communication and education empower individuals with supernumerary nipple and tissue (SNTs) to navigate potential future alterations with knowledge and confidence.

CONCLUSION

This case report describes a rare presentation of an accessory nipple on the sole of an infant's foot. Although the exact aetiology remains unclear, Kajava's classification helps categorise this variation. While supernumerary nipple and tissue (SNTs) are usually benign, awareness of potential complications and informed consent are crucial aspects of managing these anomalies. Further research is needed to elucidate the developmental mechanisms and potential implications of ectopic breast tissue.

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