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Surgical Correction of Intra-Areolar Polythelia

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ABSTRACT

Intra-areolar polythelia (IAP) is an extremely rare congenital malformation with the presence of two or more nipples within a normal sized areola. This is a case report of a 25-year-old gentleman who presented with two nipples on the areola of his left breast since birth. Surgical excision was done under local anesthesia for aesthetic purpose.

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INTRODUCTION

Accessory nipples or breast tissue are minor congenital malformations which can commonly be seen in clinical practice with an estimated prevalence of 0.2%⁽¹⁾, and can occur in both sexes. It is described as having the presence of additional nipples or related breast tissue along the embryonic milk lines tracking from the axillae to the groins. Ectopic supernumerary nipples on the other hand are found beyond the embryonic milk lines. The Kajava classification (1915) is commonly used to categorize breast configurations⁽²⁾:

- Type 1: Complete breast with nipple areola and glandular breast tissue.
- Type 2: Supernumerary breast with nipple and glandular tissue, without areola.
- Type 3: Supernumerary breast with areola and glandular tissue, without nipple.
- Type 4: Aberrant glandular tissue.
- Type 5: Pseudomamma – presence of nipple, areola and glandular tissue replaced by only fat.

- Type 6: Polythelia (supernumerary nipple) – Nipple only
- Type 7: Polythelia areolaris – Areola only
- Type 8: Polythelia pilosa – Only a patch of hair present

Intra-areolar polythelia on the other hand is a very rare congenital anomaly with a limited number of only 10 cases being reported⁽³⁾. Polythelia, defined as the presence of additional nipples can usually be identified at birth, and typically presents as an aesthetic complaint. They are usually asymptomatic but can occasionally present with increased pigmentation, size changes, pain or even discharge especially when undergoing hormonal changes during puberty, menstruation or pregnancy.

CASE REPORT

A 25-year-old gentleman presented to our clinic with a small accessory nipple (0.5cmx0.5cm) inside the areola of his left breast [Figure 1]. Both right and left areola are similar in size (2.1x2.6cm), with its normal nipples measuring 0.6x0.6cm bilaterally[Figure 2].



Figure 1 – Preoperative image of accessory nipple found in the areola of the left breast.



Figure 2 – Preoperative comparative image of bilateral breasts and areola.

He had noticed the presence of the accessory nipple since young and claimed that it has been there since birth. On further questioning, there was no history of change in size, change in colour, presence of discharge, or pain in the past. There was also no known family history of similar presentation or breast cancer and other malignancies. Physical examination showed no accessory breast tissue, pain or tenderness.

A crescent excision was performed on the intra-areolar accessory nipple to prevent post-operative deformity [Figure 3]. The procedure was done under aseptic technique using local anesthesia, and the excised tissue was sent for

histopathologic exam [Figure 4]. There were no complications during or after the surgery, and patient recovered well [Figure 5].

The excised polythelia was sent for histopathology exam and the result shows a fragment of tissue lined by epidermis with basal pigmented cells and Toker cells. The underlying stroma shows scattered sebaceous glands lobules within smooth muscle bundles. Occasional benign breast ducts are also present. No dysplasia or malignancy seen. Tissue findings are consistent with accessory nipple.



Figure 3 – Immediate post surgical excision image.

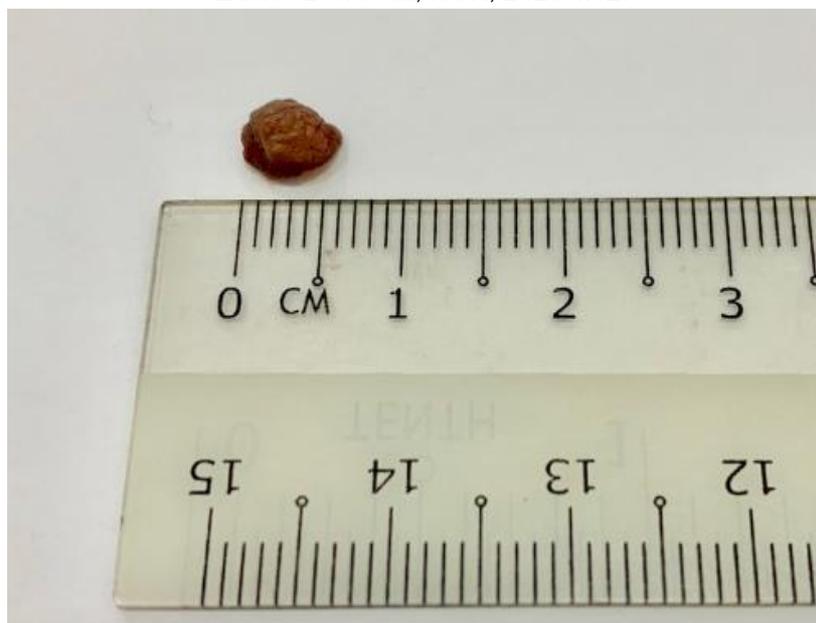


Figure 4 – Gross picture of the excised polythelia.



Figure 5 – Two months post surgical excision of accessory nipple.

DISCUSSION

Although supernumerary breast tissue is an anomaly commonly seen in clinical practice with polythelia being the most common variant, intra-areolar polythelia is extremely rare.

During embryogenesis, in the third month of gestation, the embryonic mammary ridge fails to regress normally, causing the occurrence of polythelia. This coincides with the development of the urogenital and other organ systems,

therefore association has been drawn between the incidence of renal malformations along with urogenital malignancies in children with supernumerary nipples⁽⁴⁾. There have been contradicting results in researches which studied the association between the occurrence of polythelia with renal anomalies which show no significant association statistically⁽⁴⁾. However, as there have been reports of association between cancers of the testis and kidney with polythelia, authors have suggested the possible

link between renal adenocarcinoma and polythelia. The real association between these two entities remain controversial.

Routine physical examination of a newborn should include examining for the presence of polythelia which may occur anywhere along the mammary milk line, or in ectopic sites. Parents of the newborn should be alerted regarding the presence of polythelia. Besides the fact that polythelia is potentially associated with urogenital disorders, patients with ectopic breast tissue may also be subjected to the same diseases that occur in normal breasts, such as neoplasms, fibroadenomas and malignancy⁽⁴⁾. In a female patient, hormonal changes may cause the supernumerary breast tissue to undergo changes such as pubertal enlargement, premenstrual swelling or pain, and even lactation during pregnancy.

Even though in this case, the patient appeared asymptomatic, patients with breast abnormalities can experience a lowered self esteem due to social stigma, which directly impacts their quality of life. Surgical excision has

been done for this patient mainly for cosmetic purpose. Also, in 5% of polythelia cases, malignant changes had been observed⁽⁵⁾. Therefore, surgical excision also serves as a prophylaxis against breast cancer.

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