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Nipple adenoma arising in a supernumerary mammary gland: a case report

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ABSTRACT

Nipple adenoma, a benign tumour of the breast, is a relatively rare occurrence. This report describes an even rarer case of nipple adenoma arising within a supernumerary mammary gland. The presenting symptoms were a lump and throbbing pain in the axilla. Ultrasound scan and core biopsy proved inconclusive so surgical excision was undertaken, thus allowing a histological diagnosis. The patient made a full and uneventful recovery. Physicians must be aware that diseases of the breast and nipple-areola complex may also arise in accessory mammary tissue and accessory nipples should not be discounted as a common congenital anomaly. Instead they must be regarded, examined and treated as normal breast tissue.

Introduction

Nipple adenoma, a benign tumour of the breast, is a relatively rare occurrence. Symptomatically, nipple adenoma usually presents as unilateral nipple discharge and crusting. This report describes an even rarer case of nipple adenoma arising within a supernumerary mammary gland.

Case report

A fit and healthy 33-year-old woman attended the outpatient breast clinic after non-urgent referral by her general practitioner. Her presenting symptoms were a lump and throbbing pain in the left axilla underneath an accessory nipple. The lesion had been present for 3 months and was gradually increasing in size. There was no history of trauma or nipple discharge. Past medical history was unremarkable. No family history of breast cancer was reported. The patient was nulliparous and a light smoker.

On examination, a 1 cm in diameter lump was palpable within accessory mammary tissue in the left axilla, directly beneath a supernumerary nipple. The lesion was firm, mobile and slightly tender to palpation. No evidence of overlying skin changes or nipple discharge was documented. The clinical diagnosis after physical examination was an indeterminate lump behind a left accessory nipple. Further accessory nipples were observed in the right axilla and right anterior abdominal wall. Breast examination was entirely normal.

Ultrasound scan of the left axilla showed a 5-mm subcutaneous, solid, mobile lesion with increased vascularity, directly posterior to the accessory nipple (Figure 1). Conclusive reports could not be obtained and further investigation was suggested.

Subsequent core biopsy confirmed breast tissue containing ducts lined by hyperplastic epithelium which, in places, showed a papillary architecture. It was thought that the appearance could represent a papilloma arising in association with the accessory nipple and a B3 diagnosis was reported.

Following multidisciplinary discussion and consultation with the patient, surgical

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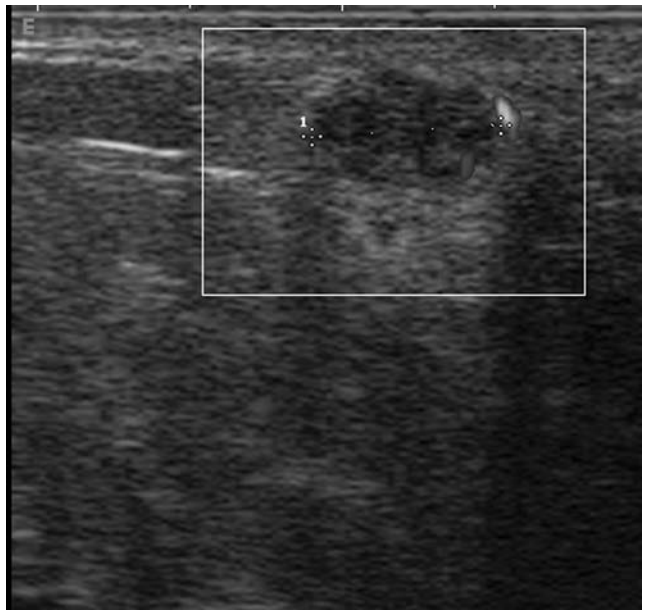

Figure 1 - A 5-mm solid appearing, slightly vascular, mobile lesion is visible just beneath the skin. This lesion is just posterior to the accessory nipple in the left axilla.

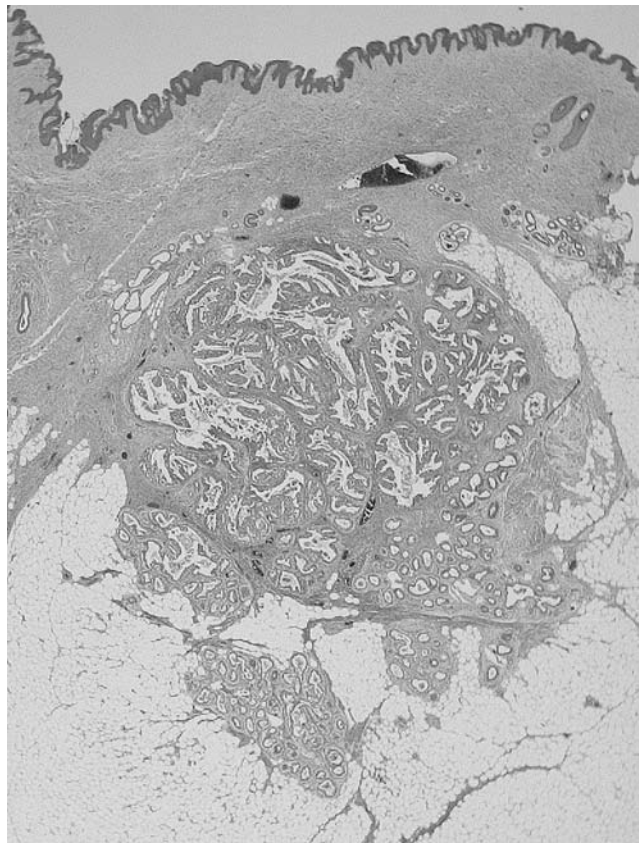

Figure 2 - In addition to normal cutaneous appendages, the skin contains scanty breast ducts and lobules with an adjacent non-encapsulated subcutaneous nodule composed of glandular structures surrounded by a myoepithelial cell layer. The glandular lumina are lined by regular epithelial cells with focal epithelial hyperplasia. The stroma surrounding the ductal structures is moderately cellular with focal areas showing a smooth-muscle appearance.

removal was undertaken. A 10-mm nodule was excised, along with a wedge of underlying accessory breast tissue from the left axilla via a transverse skin incision under general anaesthesia. The postoperative recovery was entirely uneventful and the throbbing pain in the patient's left axilla has completely disappeared after the operation.

Histology confirmed a circumscribed, non-encapsulated lesion composed of papillary and ductal epithelial proliferations in a mildly cellular stroma. The epithelium was bi-layered and areas of unusual-type hyperplasia with some overlapping of nuclei were seen. Focal cribiform architecture was noted, but did not appear to be comprised by a monotonous cell population. There was no evidence of *in situ* or invasive malignancy. The features described were those of a nipple adenoma arising within a supernumerary mammary gland (Figure 2).

Six weeks postoperatively, the patient was reviewed in the clinic. The wound was healing well and the patient had no ongoing complaints. She was discharged after a full explanation of the diagnosis.

Discussion

Nipple adenoma, also referred to as florid papillomatosis, erosive adenomatosis or superficial papillary adenomatosis[1,2], is a benign diagnosis. It most commonly affects women in their 4th and 5th decades and usually presents with unilateral, serous or bloody nipple discharge in the presence of crusting[3]. The main differential diagnosis is Paget's disease of the nipple. Less common symptoms include nodularity, tenderness, swelling, pruritis and erythema[1,3].

Histologically, the characterising feature of nipple adenoma is stromal invasion by ductal cell proliferation in the presence of a cellular bi-layer[3]. Cases are often misdiagnosed as ductal carcinoma[2] but, typically, carcinoma does not produce a double layer of cells.

Ectopic nipples, with or without accompanying breast tissue, are a common congenital abnormality with an overall incidence in women of 1%[4]. They may occur anywhere along the milk ridge due to atrophic failure of the embryonic mammary folds[4].

In 1995, 40 years after the original description attributed to Jones[5], only 174 cases of nipple adenoma had been described in the medical literature[3]. Evidently, nipple adenoma is a relatively uncommon condition in itself, but the occurrence of nipple adenoma within a supernumerary mammary gland is especially rare. After extensive review of the literature, only 4 published reports of nipple adenoma in an accessory nipple have been identified[6-9].

In summary, it is important that physicians are aware that diseases of the breast and nipple-areola complex may also arise in accessory mammary tissue. Therefore, accessory nipples should not be discounted as a common congenital anomaly. Instead they must be regarded, examined and treated as normal breast tissue.

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