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Case Report

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Nipple adenoma: case report

Abstract

Nipple adenoma is a very uncommon, benign neoplasm that involves the nipple. A palpable mass of the nipple associated with nipple discharge and erosion or ulceration is the common clinical presentation.[1] This rare benign tumor can be mistaken for breast carcinoma, Paget's disease, or galactophoric ectasia.[2] This case report describes a 35-year-old woman with a painful nipple lesion and serous discharge. Clinical examination revealed a hypertrophied left nipple with a well-defined, firm, bluish nodule. Biopsy confirmed the diagnosis of nipple adenoma. The patient underwent surgical excision and reconstruction of the nipple. Histological examination revealed simple florid ductal hyperplasia and no malignancy. Erosive nipple adenomatosis is a rare condition that should be considered in the presence of nipple erosion or tumor. Diagnosis is anatomo-pathological, and treatment is usually surgical. The prognosis is excellent.

Keywords: nipple adenoma, neoplasm, tumor, Paget's disease

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Introduction

Erosive nipple adenomatosis is a rare benign tumor that develops at the expense of a lactiferous sinus of the nipple.

Although it is not a common condition, it can present with painful nipple lesions and serous discharge, making it important to consider in the differential diagnosis of nipple erosions or tumors. Erosive nipple adenomatosis can be mistaken for more serious conditions such as breast carcinoma, Paget's disease, or galactophoric ectasia, which require different treatment approaches. The diagnosis of erosive nipple adenomatosis is anatomo-pathological, and treatment is usually surgical.

Patient and observation

A 35-year-old woman with no significant medical history presented with a painful nipple lesion that had been present for over four years, along with serous nipple discharge. During clinical examination by dermatologists, the left nipple was found to be hypertrophied, with a well-defined nodule of firm consistency that appeared bluish in some areas and had meliceric crusts. Dermoscopy revealed a gray-blue veil and polymorphic vascularization, including points, linear patterns, trunk-of-tree configurations, and chrysalis-like structures.

During the breast examination, it was observed that the patient had symmetrical C cup breasts without any discharge or inflammatory signs. On the left breast, a well-limited loss of substance in the nipple was present at the biopsy site, which had regular roughly rounded contours measuring approximately 0.5cm. No palpable nodule was found. In the right breast, no palpable nodules were found, and the lymph nodes were free. The echo-mammography showed retro-areolar ductal ectasia in the right breast, and a retro-areolar canal ectasia in the left breast, without any septum or endocanal bud. Both had anechoic content, with diameters of 1.2mm and 1.7mm respectively. Bilateral free lymph node areas were observed. The biopsy of the nipple revealed that the epithelial cells expressed estrogen receptors, while the myoepithelial cells were underlined by P63 and CK 1. The histological and immunohistochemical aspect was compatible with a nipple adenoma.

Based on the diagnosis, a decision was made to resect the right nipple with resection of the upper left hemi-nipple and grafting of the left hemi-nipple at the level of the crater of the right nipple. Postoperative histological examination revealed that the patient had nipple adenoma with lesions of simple florid ductal hyperplasia or foci of carcinoma in situ. An immunohistochemical complement was compatible with simple florid ductal hyperplasia. As a result, the patient was declared cured (Figure 1).

Figure 1 Resection of the right nipple with resection of the upper left hemi-nipple, graft of the left hemi-nipple at the level of the crater of the right nipple.

Discussion

Various terms have been used in literature to describe a rare benign nipple lesion, including papillary adenoma, nipple adenoma, or florid papillomatosis of the nipple ducts.

The first documented case of nipple adenomatosis was published by Jones in 1955.[3] It is most often found in women over the age of 50.[4,5] It predominantly affects women over the age of 50 and is typically unilateral, presenting as a tumoral infiltration of the nipple that can be

fissured, with associated nipple oozing, as it was described in Dalal et al.[3] case report.[3] Bilateral cases are exceptional, and the condition can lead to local infectious complications if left untreated.[6,7] Clinical differential diagnoses include Paget's disease, galactophoric ectasia, or breast carcinoma.[8–10] Mammography and ultrasound are always used to search for underlying tumors, as also attested by the cases presented by Ting-Ting Yang et al.[11] Breast magnetic resonance imaging (MRI) may be used to assess the extent of the tumor's involvement. However, the pattern of nipple adenoma may be confused with breast malignancy on MRI.[3] A confirmed diagnosis can only be made by histopathological analysis and immunohistochemistry.[3]

The tumor is well-defined, and there is an increase in glandular and tubular structures. These structures have two layers of cells, an inner layer of epithelial cells and an outer layer of myoepithelial cells. The presence of mitoses may sometimes be observed, but there is no cytological atypia.[11] In some cases, the glands can extend to the epidermis and cause erosion or ulceration. To distinguish nipple adenoma from invasive breast carcinoma, the presence of myoepithelial cells is key.[11] Immunohistochemical staining can be used to highlight these cells and aid in diagnosis.

Immunohistochemistry with p63 was performed in Dalal et al.[3] case and have showed intact myoepithelium.[3]

In addition to p63, cytokeratin (CK) 5/6 immunostaining was also performed in Yang's cases[11] and have demonstrated intact myoepithelial layer and proliferation of myoepithelial cells.

The WHO Classification of Tumours of the Breast identifies four histologic subtypes of nipple adenoma, with papillomatosis and mixed types commonly confused with Paget's disease or carcinoma clinically.

As is our own case, the two cases described in Yang TT et al.[11] report have ulceration over the nipple, they belong to the papillomatosis subtype, and there is no significant prognostic significance associated with the histological subtype.[11] The recommended treatment involves complete excision of the lesion and plastic reconstruction of the nipple.

Incomplete excision can lead to nipple adenoma recurrence. Some authors recommend complete excision of the nipple to ensure clear margins, while others prefer a more radical central breast excision.[2]

Nipple-preserving techniques such as wedge resection, enucleation, micrographic surgery, and cryosurgery have been shown to be equally effective in terms of recurrence, but their suitability depends on the size and location of the adenoma within the nipple.[2]

It is crucial to consider erosive adenomatosis of the nipple as a possible diagnosis in cases of nipple erosion, discharge, or tumors and to systematically investigate for an underlying galactophoric carcinoma. The prognosis is excellent.[12–14]

Conclusion

The abnormalities affecting the areola and nipple are infrequent and often poorly understood. Cancerous growths on the outer layer of skin are uncommon in this area. However, it's recommended to have a skin biopsy done on any persistent, one-sided lesion to eliminate the possibility of Paget's disease. This condition is crucial to diagnose early because it's often associated with an underlying breast adenocarcinoma.

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Conflicts of interest

All authors declare any financial interest with respect to this manuscript.

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