CASE REPORT

Intraductal papilloma of the male breast

Fleur E.E. de Vries1,∗, Armin W. Walter2, and Bart C. Vrouenraets1

1Department of Surgery, Onze Lieve Vrouwen Gasthuis, Amsterdam, The Netherlands, and 2Department of Pathology, Onze Lieve Vrouwen Gasthuis, Amsterdam, The Netherlands

*Correspondence address. Department of Surgery, Onze Lieve Vrouwen Gasthuis, Jan Tooropstraat 164, 1061 AE Amsterdam, The Netherlands. Tel: +31-6-45-03-86-03; Fax: +31-20-6854014; E-mail: devries.fee@gmail.com

Abstract

We report the case of a 29-year-old male patient who presented with a painless lump of his left breast that was found to be an intraductal papilloma. This is an extremely rare, but benign disease in the male breast. We subsequently discuss radiologic tests and treatment options.

INTRODUCTION

In contrast to the female breast, in which benign and malignant diseases are relatively common, the male breast is not so often affected. However, also male patients can present with breast abnormalities. There is a wide differential diagnosis of a male breast lump comprising gynecomastia, fibroadenoma and lipoma. Next to this, more rare conditions should be considered like florid ductal hyperplasia, columnar cell lesions, ductal or lobular carcinoma in situ, intracystic papillary carcinoma and invasive breast cancer. An intraductal (or intracystic) papilloma (IP) is an extremely rare benign disease of the male breast. We describe the case of a healthy 29-year-old male patient with an IP of his left breast.

CASE REPORT

A 29-year-old male patient presented at the outpatient clinic with a painless palpable lump. Four years before, he had consulted his family doctor because of a swollen left breast. Ultrasonography at that time demonstrated gynecomastia (BIRADS II), probably due to (mis)use of anabolic steroids. At presentation, he had a persisting swollen left breast with a rounded palpable mass under his nipple, which was mildly painful on palpation. He did neither longer use anabolic steroids nor any other medication. Our patient wanted the mass to be removed because of cosmetic reasons rather than his mild complaints. On clinical examination, we saw a healthy young man with a palpable 1-cm large tumor lateral under his left nipple.

Ultrasonography showed a long-shaped solid structure with lobular architecture. Additional mammography showed a lobulated structure behind the nipple with a diameter of ~1.5 cm without microcalcifications (BIRADS III). Histological and immunohistochemical examination of a core needle biopsy demonstrated an intraductal proliferation compatible with an IP. Subsequently, surgical excision of the lump was performed under general anesthesia. Microscopy of the resected specimen confirmed the diagnosis of an IP of ~1 cm with a free margin of <1 mm. Sections through preexistent breast tissue showed central dilated cystic structures with a papillary proliferation of epithelial cells with partly cylindrical morphology and heterogenous (non-monotonous) appearance. We found no indication of invasive growth (Figure 1). Immunohistochemistry showed 10% MIB-1 activity. SMA and keratin 5/6 staining demonstrated the presence of myoepithelial cells throughout the lesion with a heterogenous random staining pattern in the keratin 5/6 slide supporting the diagnosis of a benign proliferation (Figure 2).

DISCUSSION

We described the case of 29-year-old healthy male patient with an IP of his left breast. In contrast to an intraductal papillary
carcinoma or an invasive papillary carcinoma, an IP is a benign disease. The clinical presentation is a painless or painful subareolar mass, with or without nipple discharge. An IP can present at any age [1–4]. Radiologic diagnostic tests involve ultrasonography (with fine needle aspiration and needle biopsy) and mammography. Magnetic resonance imaging (MRI) can be performed supplementary. A study of Sarica et al. [5] on MRI for papillary breast lesions concluded that the major benefit of retroareolar imaging appears to arise from its ability to demonstrate ductal relation and extension of contrast-enhanced regions. Using immunohistochemistry for pathological diagnosis is very important to distinguish between an IP and a papillary carcinoma. Once diagnosed, both conservative (close follow-up) and operative (surgical excision) are possible. A study of Lam et al. [6] concluded that the radiologic features are not sufficiently sensitive or specific to differentiate benign from malignant papillary lesions and emphasized the need of surgical excision. Contrarily, a study of Sydnor et al. [7] found that benign papillomas diagnosed at core biopsy are infrequently (3%) associated with malignancy, and therefore mammographic follow-up seems reasonable. Swapp et al. [8] also described that in the case of a core biopsy-proven benign lesion, follow-up is justified and excision is not necessary. They emphasized that because of the high association with malignancy (67%), diagnosis of atypical papilloma at core biopsy should prompt excision for definitive diagnosis. When surgical treatment is performed, local excision of the lesion should be curative. Recurrence of the IP after local excision was only described once [3]. Overall, prognosis is excellent.

In conclusion, IP in the male breast is an extremely rare benign disease. The lesion can be treated by simple local excision or close follow-up.

CONFLICT OF INTEREST STATEMENT

None declared.

REFERENCES

1. Durkin ET, Warner TF, Nichol PF. Enlarging unilateral breast mass in an adolescent male: an unusual presentation of intraductal papilloma. J Pediatr Surg 2011;46:e33–5.
2. Shim JH, Son EJ, Kim EK, Kwak JY, Jeong J, Hong SW. Benign intracystic papilloma of the male breast. J Ultrasound Med 2008;27:1397–400.
3. Yanamoto H, Okada Y, Tanigushi H, Handa R, Naoi Y, Oshima S, et al. Intracystic papilloma in the breast of a male given long-term phenothiazine therapy. Breast Cancer 2006;13:84–8.
4. Szabo BK, Wilczek B, Saracco A, Szakos A, Bone B. Solitary intraductal papilloma of the male breast: diagnostic value of galactography. Breast 2003;9:330–1.
5. Sarica O, Uluc F, Tasmali D. Magnetic resonance imaging features of papillary breast lesions. Eur J Radiol 2014;83:52:34–30.
6. Lam WW, Chu WC, Tang AP, Tse G, Ma TK. Role of radiologic features in the management of papillary lesions of the breast. Am J Roentgenol 2006;186:1322–7.
7. Sydnor MK, Wilson JD, Hijaz TA, Massey HD, Shaw de Paredes ES. Underestimation of the presence of breast carcinoma in papillary lesions initially diagnosed at core-needle biopsy. Radiology 2006;242:58–62.
8. Swapp RE, Glazebrook KN, Jones KN, Brandts HM, Reynolds C, Visscher DW, et al. Management of benign intraductal solitary papilloma diagnosed on core needle biopsy. Ann Surg Oncol 2013;20:1900–5.