Short communication

Encapsulated papillary breast carcinoma in a male patient in association with microdeposits of carcinoma cells in the needle track and sentinel lymph node treated conservatively

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We present an encapsulated papillary breast carcinoma in a male patient, in association with microdeposits of carcinoma cells within the needle track, in the lymphatic spaces of the breast parenchyma and subcapsular sinus of two sentinel lymph nodes in which conservative treatment has been recommended. Both in females and males, papillary tumours and particularly encapsulated papillary breast carcinoma can be associated with microdeposits mechanically displaced, which have to be differentiated from true invasion and metastases and treated conservatively.

Key words: encapsulated papillary carcinoma, breast, male, displaced cells.

Dear Sir, we read with great interest the paper of Douglas-Jones and colleagues [1] regarding difficulty in diagnosis arising from displaced epithelium after core biopsy in intracystic papillary lesions of the breast. That paper described this phenomenon in two cases of 76- and 69-year-old female patients, respectively. In those two cases, despite the fact that after a previous biopsy (performed with a 14G biopsy needle) the authors found groups of epithelial cells within the granulation tissue outside the cystic space containing the papillary tumour, as well as in the vascular spaces of the breast parenchyma (in one case), subsequent axillary lymph node sampling showed no evidence of metastases. In contrast, we report here a 75-year-old male patient presented for left breast mass and with nipple bloody discharge. Tru-cut biopsy revealed a papillary proliferation of epithelial cells with minimal atypia and lack of myoepithelial cells. Total mastectomy with sentinel lymph node (SLN) dissection was performed. Within the breast specimen, a cystically dilated space of 40 mm diameter was identified, containing a 25 mm diameter grey, friable, and bosselated mass attached to the cystic wall (Fig. 1A). Microscopic examination revealed a papillary proliferation surrounded by a thick fibrous capsule. The papillary projections were lined by several layers of cells with low/intermediate nuclear grade and few atypical mitotic figures (Fig. 1B, C). Immunohistochemical stains revealed the complete absence of myoepithelial cells in both papillary projections and at the periphery of the lesion (Fig. 1D, E). In the vicinity of the lesion, areas of low-grade ductal in situ carcinoma were observed, as well as two areas of small groups of entrapped tumour cells on
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the previous biopsy site (in association with granulation tissue and hemosiderin pigment) and involving some vascular spaces (Fig. 1F, G, H). Examination of the two SLNs revealed several similar foci of tumour cells within the subcapsular sinus (Fig. 1I, J).

Approximately 85% of male infiltrating mammary carcinomas are of NST (no special type) [2, 3]. Papillary male breast carcinoma of invasive or in situ type are relatively more common among men than women [3, 4, 5, 6, 7, 8, 9, 10, 11, 12]. However, except for the case of a 78-year-old patient with an invasive papillary breast carcinoma, all the other anecdotal case reports of papillary lesions in male breast were of in situ type [4]. The encapsulated papillary breast carcinoma is a very rare lesion, characterised by the presence of a proliferation with papillary architecture located within an apparent cystic space lined by a thick capsule. Both papillary structures and the fibrous capsule lack myoepithelial cells, raising the possibility that encapsulated papillary carcinoma may represent a minimally invasive, low-grade, indolent form of invasive carcinoma rather than an in situ lesion. The lesion has been recently described in elderly women as a mass located in the subareolar area and associated with nipple discharge, similar to the present case. In the absence of an infiltrative component this tumour has a very favourable prognosis. Because of their fragile structure, papillary lesions are especially vulnerable to epithelial displacement after needling procedures [1]. Small clusters of atypical cells may be found in the track of the needle embedded in reactive changes, as well as, although very rarely reported, in regional lymph nodes, but never reported in males, in association with an encapsulated papillary breast carcinoma [13]. Although one study mentioned a higher rate of recurrence associated with the presence of epithelial displacement, the potential risk for local recurrence is ameliorated because the biopsy site and needle track have been surgically removed [14]. In the present case, carcinoma cells within lymphatic spaces in the breast parenchyma and in the vicinity of the needling procedure were associated with several tumour deposits in the subcapsular sinus of two SLNs. This raises the hypothetical possibility that these displaced cells migrating to the axillary lymph nodes could persist for a variable period of time and acquire invasive characteristics. However, according to recent literature emphasising that these displaced epithelial cells do not have clinical significance, axillary dissection was not recommended [15]. The patient underwent radiotherapy followed by hormonal therapy and is well with no signs of local recurrence or distant metastases 17 months after the diagnosis.

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