Cystosarcoma phyllodes in a 13-year-old Muslim girl treated with conservative surgery: a case report

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Summary

Phyllodes tumor of the breast is an unusual tumor with an incidence of 1 in 100,000. In particular, it is a very rare neoplasm in adolescent girls and young women. The authors present a case of a 13-year-old adolescent girl with a large unilateral palpable mass in her right breast. The diagnosis of cystosarcoma phyllodes was made in a frozen section after wide local excision. The management and the cytological and histological characteristics are described with particular reference to the very unusual clinical presentation in this patient.

Key words: Cystosarcoma phyllodes; Breast mass; Adolescent girl; Frozen section; Imprint cytology.

Introduction

Phylloides tumor of the breast is a biphasic tumor with a clinical behavior not correlated well with the histological findings. The optimal treatment of this tumor remains controversial [1].

These rare fibroepithelial lesions account for less than 1% of all breast neoplasms. Moreover, phyllodes tumor of the breast is a very rare neoplasm in young women and especially adolescent girls less than 15 years of age [2].

A case of a 13-year-old girl who presented at our Department with a unilateral palpable mass in her right breast is presented.

Case report

A 13-year-old Muslim girl presented at our Department with a two-month history of enlargement of her right breast. She had had menarche one year before. The physical examination showed a non-tender, well circumscribed, 6 x 4 cm, firm and mobile mass in the upper inner quadrant of the right breast. There was no involvement of the skin and no palpable axillary lymph nodes.

An ultrasound examination showed an hyperechoic, solid mass with clear margins in the upper inner quadrant of the right breast. This lesion measured 57 x 38 mm.

The mass was excised through a circumareolar incision (Figure 1). During the operation rapid imprint cytological examination and frozen section were performed. Smears were obtained by imprinting the tumor cut surface. One of them was immediately stained using the rapid Hemacolor staining set (Merck), to decide adequate sampling. Another smear was stained with the Papanicolaou method. The tumor consisted of epithelial and stromal components. Epithelial cells were tightly packed in sheets and they were superimposed by naked bipolar nuclei (myoepithelial cells). The stromal component consisted of spindle and ovoid cells (Figure 2). Histologically, the lesion was essentially an intracanalicular fibroadenoma with multiple-leaf projections of the stroma, characterized by increased stromal cellularity and focal proliferation of the ductal epithelium. There was no cytological atypia, nuclear pleomorphism or mitotic activity. Similarly, areas of hemorrhage or stromal necrosis were absent. The appearance was that of a benign cystosarcoma phyllodes (Figure 3).

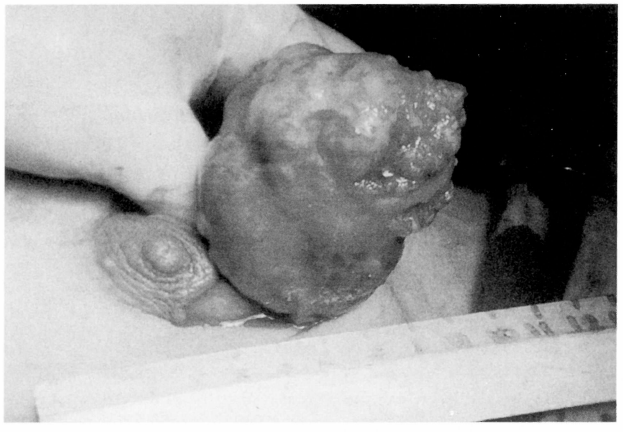

Figure 1. — Cystosarcoma phyllodes of the right breast.

Discussion

Phylloides cystosarcoma is an uncommon tumor closely related to fibroadenoma but distinguishable by even more hypertrophy and greater cellularity of the fibrous tissue stroma [3]. It has been reported in patients ranging in age from 10 to 86 years, mean age 45 years, but its maximum incidence (82%) peaks in the 30 to 60 age group [4]. Thus it is very unusual in young women and in particular in adolescent girls. Up to now, about 35 cases of cystosarcoma phylloides have been reported in girls under the age of 20 years [5]. The majority of these tumors have been classified as benign. This classification is usually based on stromal findings, particularly the degree of cellular atypia and mitotic activity [6]. In our case we observed negligi-

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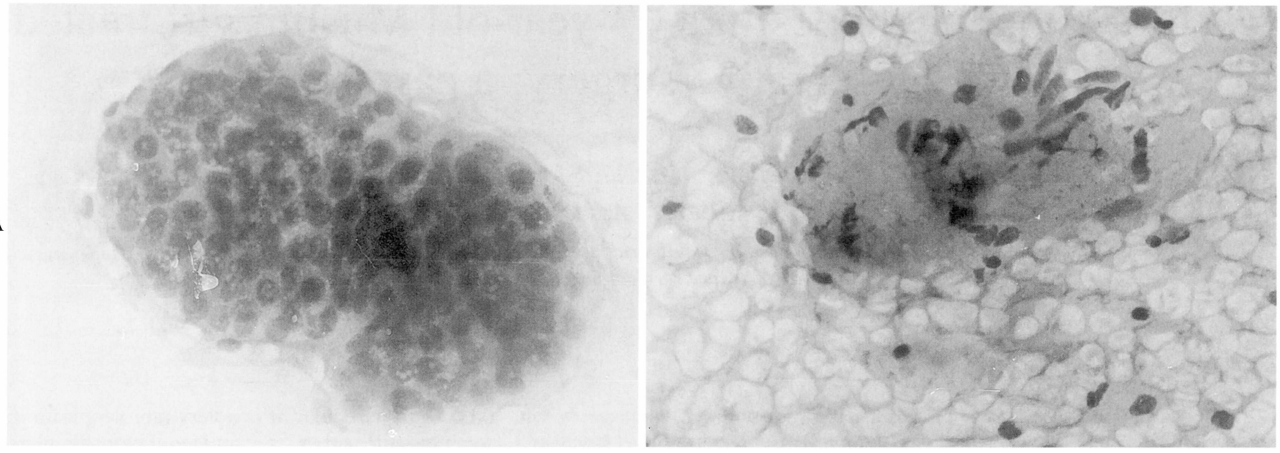

Figure 2. — Imprint cytological examination of the tumor cut surface. (A) A crowded sheet of bland epithelial cells, some regular spacing, and inconspicuous secondary irregular lumen formation (PAP x 40). (B) Myxoid stroma component containing fibroblastoid spindle-shaped and oval cells (PAP x 40).

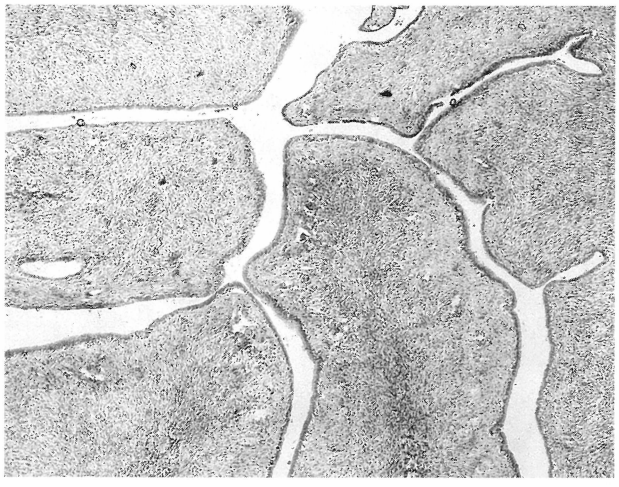

Figure 3. — Benign cystosarcoma phyllodes, with multiple leaf-like projections of the stroma (H&E x 40).

ble nuclear atypia and slightly increased mitotic activity. The management of these lesions varies from simple excision to radical mastectomy but in our case we performed a simple excision with a 2-cm margin of normal tissue in order to eliminate the possibility of local recurrence [7, 8, 9]. Our therapeutic approach was related to the use of frozen section diagnosis and rapid imprint cytological evaluation of the surgical specimen. The girl has been followed-up with clinical examinations and serial ultrasound scans every three months for one year and we have not noticed symptoms or signs of local recurrence.

In conclusion phylloides cystosarcoma in an adolescent girl is a very rare lesion of the breast, with a less aggressive clinical behavior [10]. Mitotic activity is the most important factor for assessing the potential of local recurrence [11]. Our experience and review of the literature suggests that adequate local surgery is the treatment of choice and adjuvant treatments have no place in the routine management of phylloides tumors [12,13,14]. Finally, cystosarcoma phylloides in this age group should be treated so as to maximize breast conservation [6].

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