

Case Report

Myofibroblastoma of the breast in an adolescent

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ABSTRACT

A case of myofibroblastoma of the breast was recently diagnosed in an adolescent Omani boy. In this report, the clinical, histopathological and the radiological features of this rare disease are being discussed. We conclude that, myofibroblastoma of the breast, which was earlier described, predominantly, in elderlies, can occur in people from any age group.

Keywords: Breast, neoplasm, adolescent, myofibroblastoma, benign, spindle cells.

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Myofibroblastoma (MFB) of the breast is a rare, benign, neoplasm predominantly found in men in their 7th decade of life. Approximately 40 cases have been reported in the literature. But never before described in an adolescent. We believe that this is the first report of myofibroblastoma of the breast in a 15 year old boy. It is also the first case diagnosed in Oman.

Case report. A 15-year-old Omani boy was seen in the surgical clinic with the complaint of a painless lump in the right breast which was first noticed one year back. It was gradually increasing in size, and there was no history of constitutional symptoms or nipple discharge. No history of preceding trauma could be elicited. There was not any relevant past history. Physical examination revealed a healthy looking young boy. Systemic examination was normal. Breast examination showed a firm, 4x4 cm, mobile lump in the right breast. It was about 6 cm from the areolar margin, in the medial upper quadrant. Secondary sexual characteristics and genitalia were normal for his age. Fine needle aspiration cytology was insufficient to

make a diagnosis. He underwent an excision biopsy of the lump which, was, histologically and immunohistochemically, diagnosed as MFB.

Pathology. Gross pathology was that of a firm, rubbery mass 3.5x3x2 cm with lobulated external surface. Cut section was greyish white and firm. Microscopically it was devoid of mammary ducts and lobules, and compressed breast parenchyma formed a pseudocapsule. Bundles of slender, bipolar, uniform spindle cells arranged in fascicles with intervening broad hyalinized collagen were seen throughout the tumor. Mitotic figures were not seen. It was immunoreactive for desmin, actin and vimentin but not for cytokeratin and factor VIII. (Figures 1, 2 & 3)

Discussion. Myofibroblastoma of the breast was first described by Worgotz et al in 1987.¹ Although myofibroblasts are ubiquitous cells in the body, myofibroblastic neoplasms are rare. Approximately 40 cases of MFB in the breast have been reported worldwide.² This case is the first from the Middle East. Previously reported cases have all been in adults, both male and female, and

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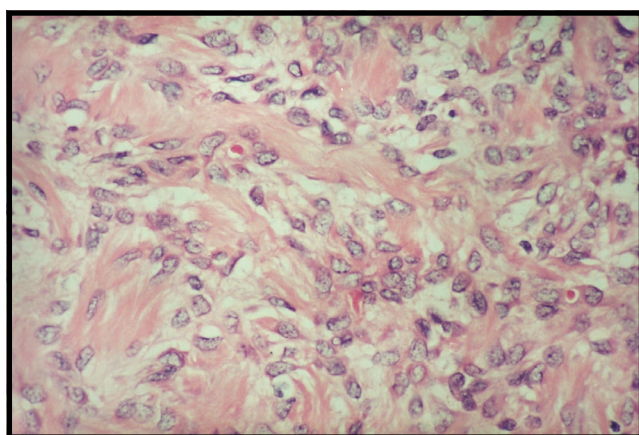


Figure 1 -The spindle cells in tascicles with intervening bands of collagen. (Hematoxylin and Eosin x 400).

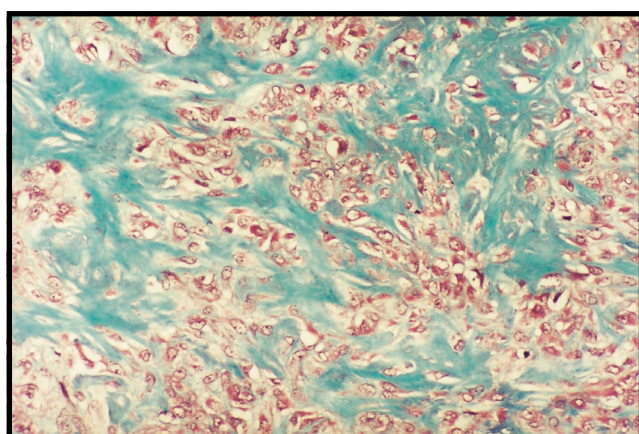


Figure 2 -Spindle cells (red contrasting with collagen (green) (Masson Trichrome x 400).

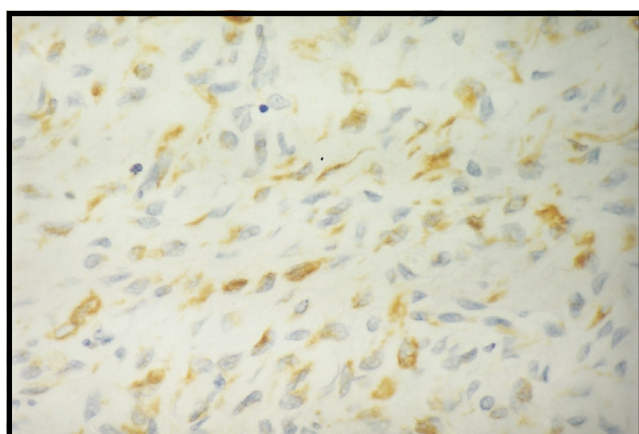


Figure 3 -Immunohistochemistry - the spindle cells show positivity to vimentin (x 400).

predominantly in the 6th and 7th decade of life. Our case is the first where the diagnosis has been made in an adolescent boy. As far as the clinical and pathological features are concerned, MFB of the breast is well described in the literature.¹⁻³ Basically it is a benign looking, well circumscribed, mass. The size of the lesion in this case is in keeping with the range (1-4 cm), previously described in the majority of the reported cases. However, lesions as large as 10 cm have been reported.⁴ Radiological investigations, although advocated, we did not feel necessary in our patient, as he was only 15 years of age and was clinically convinced of the benign nature of the lesion. However, mammography usually shows a well-circumscribed soft tissue mass with no microcalcifications. An ultrasound, on the other hand, shows a uniform echo pattern and no wall thickening or acoustic shadows.⁵ Histologically, MFB has no true capsule and cells are spindle shaped arranged in fascicles with intervening broad collagen bands. It is also immunoreactive for desmin, vimentin and actin but not for cytokeratin and S-100 protein.^{3,4} These histological features were typically shown in our case. The accepted management for these cases is excision biopsy, and no case of recurrence has been reported so far.⁶ Our patient was followed up for more than 18 months with no sign of recurrence.

In conclusion, MFB of the breast appears to occur worldwide. It can affect any age, male or female, but is commonly a tumor of the elderly. Histological and immunohisto-chemical studies together represent the cornerstone in diagnosing MFB.

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