INTRODUCTION

Myofibroblastoma are commonly found in male breast but recently quite a few have been reported in female breast as well. Myofibroblastoma are unusual benign mesenchymal tumours of breast. The gross appearance is that of a well-circumscribed nodule, characteristically small, rarely exceeding 3 cm. As these tumours share morphological and immunohistochemical features with solitary fibrous tumour, some authors intend that these should be classified as solitary fibrous tumours. Myofibroblastomas are positive for CD34 whereas myoepithelial cells are immunoreactive for S-100 protein and cytokeratin. Non-palpable myofibroblastomas has been detected by mammography. There is no fixation to skin. Myofibroblastomas are differentiated from spindled myoepithelial cells and genetically related to spindle cell lipoma on the basis of their distributions as well as their immunohistochemical features.

We are presenting a case of an unusually large myofibroblastoma, which mimicked a malignant breast tumour.

CASE REPORT

A 40 years old gentleman known case of tetralogy of Fallot, was operated in infancy in abroad. He was referred to us from Department of General Surgery for unilateral gynecomastia of right breast for a few months and since the last one month it was rapidly growing (Figure 1). Lump over the right breast was well localized, non-tender with normal temperature compared to surrounding skin and with clear margins oval in shape with smooth surface. The overlying skin was normal without prominent veins or fixation with lump. Lump was freely mobile over underlying muscles with no transmitted pulsation and no bruit on auscultation. There was no palpable lymphadenopathy over right axilla and internal mammary group.

Ultrasound showed well encapsulated solid mass with high vascularity. His haematological, renal, hepatic and coagulation profiles were normal. He also had left sided inguinal hernia. Surgery was scheduled same time for both problems because of cardiac issue, after getting fitness from cardiology.

Skin was opened with peri-areolar incision, and the dermis and subcutaneous fat with inferior half peri-areolar incision. After leaving 0.5 cm subcutaneous fat, the superiorly based areolar flap was lifted and the lump was explored. With blunt dissection, the lump was excised with intact capsule. There were large vessels running over the surface of lump and a large feeder vessel at the base of lump (Figure 2). The tumour was extremely well circumscribed with 10 x 10 cm in size and 500 grams in weight. It had no infiltration into the adjacent breast tissue. The resection margin was free of tumour. After securing hemostasis, the purse-string sutures were done with Gortex and the skin was closed with 4-0 monocryl subcutically. The patient is well with no evidence of recurrence.
A rapidly enlarging myofibroblastoma in a male breast

Specimen was sent for histopathology which showed hypocellular myxoid neoplasm with uniform ovoid cells and thick hyalinized blood vessels. Immunostaining showed diffuse positivity of the tumour cells for CD34, CD10, BCL-2 (weak) and CD99 (weak). Focal positivity for desmin, H-caldesmon and S100 was also noted. Cytokeratin was negative. The overall features were consistent with myofibroblastoma.

DISCUSSION

Soft tissue neoplasms of the breast that are composed of myofibroblasts have been classified as myofibroblastomas. Myofibroblasts are spindle-shaped or fusiform mesenchymal cells originate from fibroblasts and are present in small numbers in all tissues. They are genetically related to spindle cell lipoma as obvious by its fatty component and gross appearance. Increased numbers of myofibroblasts is seen in different conditions including inflammatory reactions, fibromatosis and some sarcomas. Ultrastructurally, myofibroblasts have features resembling myoepithelial cells. Myofibroblasts are distinguished from spindle myoepithelial cells largely on the basis of their distribution, immunohistochemical staining and electron microscopic characteristics. On the basis of their phenotypic state, both these types of cells may be reactive with anti-actin antibodies. Myoepithelial cells are usually positive for protein S-100 and cytokeratin in their epithelial phenotype, but myofibroblasts are negative. Their most common immunoprofile is diffuse desmin and CD34 positivity. Histological features and immunohistocytochemical features in this case were those of a myofibroblastoma. Microscopically, myofibroblastomas can be divided into five sub-types; classical, epitheloid, collagenised, cellular and infiltrative. In this case, the myofibroblastoma had features of mixed classical and collagenised type. Mammary neoplasms derived largely or entirely from myofibroblasts are uncommon. Cases reported in the literature are mostly in men ranging from 41 to 85 years of age (median age 64 years); however, this lesion also occurs in women. On X-ray mammograph, the tumours are homogeneous lobulated and well circumscribed and lack microcalcifications. Magnetic resonance imaging revealed homogeneous enhancement with internal septations. There is no fixation to overlying skin.

Grossly majority of the lesions are less than 4 cm. The excised mass is firm and rubbery with a lobulated out surface. The cut surface consists of homogeneous grey to pink whorled or lobulated tissue. Cystic degeneration, necrosis and hemorrhage have not been reported. The tumour described in this report is unusual owing to its presentation, with very rapid enlargement mimicking a malignant tumour, and its large size, much greater than any previously reported.

REFERENCES