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Fibrosarcoma of anterior abdominal wall: A rare case report

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ABSTRACT

INTRODUCTION: Adult Fibrosarcoma (FS) is very rare and it constitutes approximately 1% of adult sarcomas. It is a malignant or intermediate (rarely metastasizing) tumor, composed of fibroblasts with variable collagen production. Fibrosarcomas usually involve the deep tissues of the extremities, trunk, head and neck. Adult FS usually appears in the fourth to sixth decades of life with a male predominance.

CASE REPORT: A 62 years male patient presented with a large swelling over anterior abdominal wall since 20 years. Physical examination revealed a 15 × 15 cm large lobulated swelling situated over right hypochondrium and extending to epigastrium and right lumbar region. A wide local excision of tumour was done till the posterior rectus sheath. As the skin was involved the tumour was excised along with the skin. A large defect of around 20 × 20 cm was created in anterior abdominal wall. Mesh was placed over the defect and defect was closed by rhomboid flap reconstruction.

DISCUSSION: The World Health Organization (2002) defined fibrosarcoma as a malignant tumor, composed of fibroblasts with variable collagen and, in classical cases, it has a herring bone pattern on light microscopy. Fibrosarcomas typically present as a non-specific soft tissue mass, sometime in a previously irradiated field or rarely in association with implanted foreign material.

Fibrosarcomas metastasize to lungs and bone, especially the axial skeleton, and rarely to lymph nodes.

CONCLUSION: Although rare, fibrosarcoma should also be kept as a differential diagnosis in a case of anterior abdominal wall lumps.

1. Introduction

Adult Fibrosarcoma (FS) is very rare and it constitutes approximately 1% of adult sarcomas. It is a malignant or intermediate (rarely metastasizing) tumor, composed of fibroblasts with variable collagen production. Fibrosarcomas usually involve the deep tissues of the extremities, trunk, head and neck. Adult FS usually appears in the fourth to sixth decades of life with a male predominance.

Adult fibrosarcoma may arise in dermatofibrosarcoma proturbens (DFSP), Solitary Fibrous Tumor (SFT) and in well differentiated liposarcoma (LPS), either in the primary or in a recurrence, as a reflection of tumors progression.

Here a rare case of fibrosarcoma of the anterior abdominal wall was managed in a private hospital and is presented.

2. Case report

A 62 years male patient presented with a large swelling over anterior abdominal wall since 20 years. Physical examination revealed a 15 × 15 cm large lobulated swelling situated over right hypochondrium and extending to epigastrium and right lumbar region. Swelling was firm to hard in consistency, non-tender and mobile in all directions and became prominent on leg raising. Swelling was fixed to overlying skin.

Local Ultrasound revealed heterogeneous lesion of benign aetiology over epigastric region with no intra-abdominal extension. FNAC was done suggestive of desmoid tumour. Ultrasound Abdomen and Pelvis and Chest X-ray were negative for any metastasis.

With no evidence of any intra-abdominal extension and keeping the diagnosis of Desmoid tumour patient was posted for surgery. Due to the size of the tumour, a rhomboid flap reconstruction was planned prior to the surgery to cover the defect after excision. A wide local excision of tumour was done till the posterior rectus sheath. As the skin was involved the tumour was excised along with the skin. A large defect of around 20 × 20 cm was created in anterior abdominal wall. Mesh was placed over the defect and

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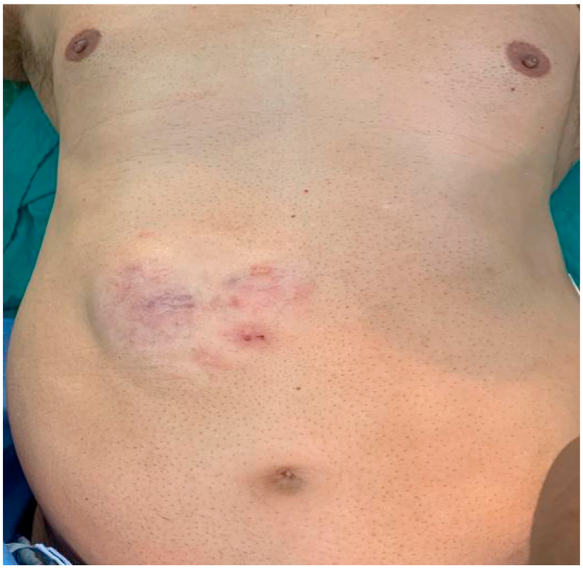

Fig. 1. Swelling situated over right hypochondrium and extending to epigastrium and right lumbar region.

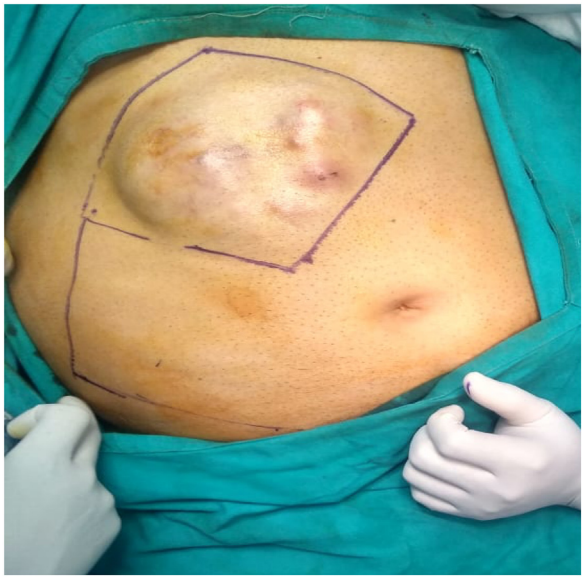

Fig. 2. Wide excision of Tumour with Rhomboid Flap Reconstruction was planned.

defect was closed by rhomboid flap reconstruction and 14 number suction drain was placed. The tumour was sent for Histopathology.

Patient tolerated the surgery well and was vitally stable post-operatively.

On Histopathology, microscopically tumour showed intersecting fascicles of spindle cells with elongated slender nuclei and moderate amount of eosinophilic cytoplasm. Focally herring bone growth pattern was seen which was suggestive of low grade fibrosarcoma reaching up to but not involving the base. Immunohistochemistry revealed the tumour was CD34 & CD68 positive and Ki 67- 5%. Patient was sent to an oncophysician for further management.

3. Discussion

The World Health Organization (2002) defined fibrosarcoma as a malignant tumor, composed of fibroblasts with variable collagen and, in classical cases, it has a herring bone pattern on light microscopy. Conventional fibrosarcoma falls into two main groups, the adult and infantile types, both very uncommon.

Once considered the common adult sarcoma, the incidence of adult fibrosarcoma has declined dramatically over the past several decades. This is due to (i) evolution in the classification of soft tissue tumours (ii) recognition of clinically, morphologically and genetically distinctive subtypes of fibrosarcoma and (iii) increased understanding of the many other mesenchymal and nonmesenchymal tumours that may mimic fibrosarcoma (Figs. 1–4).

Adult Fibrosarcoma (FS) is very rare and it constitutes approximately 1% of adult sarcomas. It is a malignant or intermediate (rarely metastasizing) tumor.

Fibrosarcomas typically present as a non-specific soft tissue mass, sometime in a previously irradiated field or rarely in association with implanted foreign material.

Fibrosarcomas are composed of relatively monomorphic spindled cells, showing no more than a moderate degree of pleomorphism; tumors showing a greater degree of pleomorphism

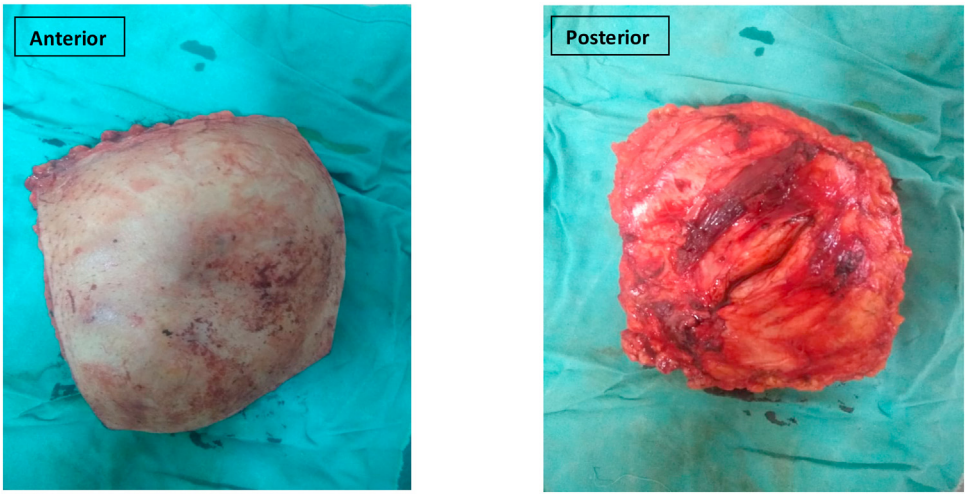

Fig. 3. Excised Tumour.

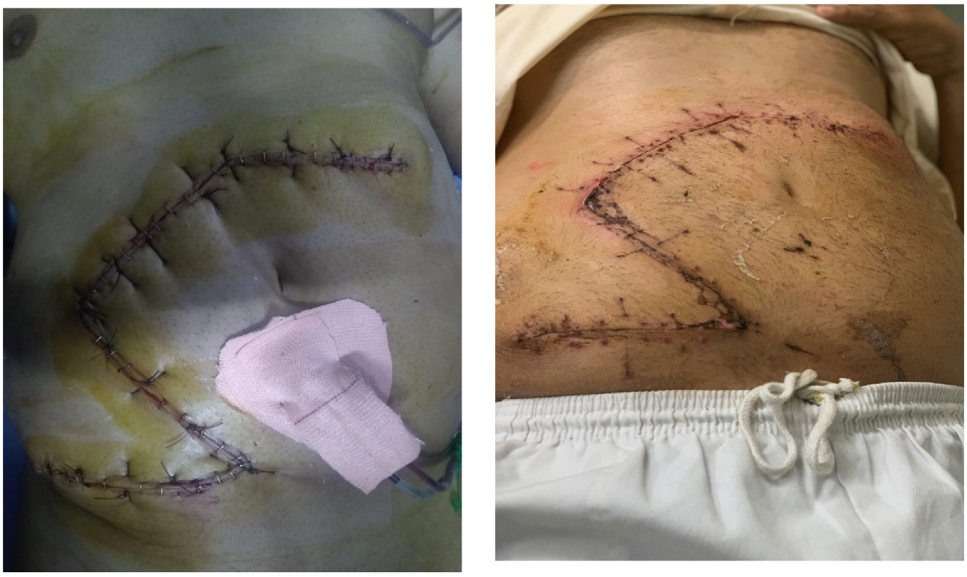

Fig. 4. Rhomboid Flap Reconstruction.

should be classified as undifferentiated pleomorphic sarcomas. The neoplastic cells are characteristically arranged in long, sweeping fascicles that are angled in a chevron-like or herringbone pattern. Storiform areas can be present, but the presence of pronounced storiform growth should suggest fibrosarcoma arising from dermatofibrosarcoma protuberans. The cells have tapered darkly staining nuclei with variably prominent nucleoli and scanty cytoplasm. Mitotic activity is almost always present but variable in quantity. A variable amount of stromal collagen is present, ranging from a delicate intercellular network to zones with diffuse or k̈eloid-likeśclerosis or hyalinization. Some Fibrosarcomas may contain relatively bland zones mimicking fibromatosis. By immunohistochemistry Fibrosarcomas express vimentin and may occasionally show limited expression of smooth muscle actin, representing myofibroblastic differentiation. CD34- positive tumors showing fibrosarcoma morphology likely represent fibrosarcoma arising in dermatofibrosarcoma protuberans or fibrosarcoma-like progression in malignant solitary fibrous tumour.

Fibrosarcomas metastasize to lungs and bone, especially the axial skeleton, and rarely to lymph nodes. Five year survival rate 39–54% is noted. Surgery remains the principal therapeutic modality in soft tissue sarcoma. Post-operative external beam radiotherapy is helpful to reduce the likelihood of local recurrence in high grade sarcoma.

4. Conclusion

Although rare, fibrosarcoma should also be kept as a differential diagnosis in a case of anterior abdominal wall lumps.

Declaration of Competing Interest

The authors report no declarations of interest.

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Ethical approval

The study is exempt from ethical approval.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. The patients identifying details have not been disclosed.

Author contribution

All Authors have contributed to the case report.

Registration of research studies

N/A.

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Further reading

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