ABDOMINAL WALL TUMOUR- PRIMARY OR SECONDARY: A CASE REPORT
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PRESENTATION OF CASE

60-year-old male patient, farmer by occupation, with no comorbidities presented with recurrent abdominal swelling of 4 years duration with history of pain in the swelling since previous 2-3 months. He was earlier operated for a swelling at the same site 7 years before in a hospital in a neighbouring small town. Neither the details of that procedure were available, nor it was known the specimen was sent for histopathological examination or not.

He was apparently alright for 4 years when he started noticing a small swelling which was gradually increasing in size. Patient started having pain in the swelling since previous 2-3 months which was aggravated on bending and on exertion. There were no other constitutional symptoms like anorexia, weight loss or jaundice.

On examination patient was thin built, lean, but otherwise general condition was good. There was no jaundice or anaemia.

After local examination of the abdomen revealed a vertical paramedian operative scar in right lower quadrant of abdomen with a prominent 6*5 cm lump underneath the lower third of scar.

The lump was hard, arising from parietal wall in right iliac fossa with ill-defined margins but mobile in transverse direction on relaxation of anterior abdominal wall muscles. It was found tethered to skin and lower part of previous operative scar but was free from rest of the skin over the lump. There was no appreciable tenderness. Rest of the abdomen was unremarkable. External genitalia were normal. Supraclavicular fossa free.

Routine ultrasound abdomen confirmed clinical finding of anterior abdominal wall tumour.

MRI of abdomen revealed a lobulated mixed intense area in muscular plane of anterior abdominal wall measuring 64 * 64*63 mm? Malignant lesion? Desmoid tumour. There was a mixed intense lesion seen in segment 6 of liver of size 23*21 mm? metastasis.

CLINICAL DIAGNOSIS
Abdominal wall soft tissue sarcoma with solitary liver metastasis.

Based on the history of recurrent tumour in a 60 years male, clinical examination findings of hard ill-defined tumour arising from anterior abdominal wall, magnetic resonance imaging findings of mixed intensity lesion invading peritoneum with a mixed intensity nodule in right lobe of liver and intraoperative findings of infiltrating abdominal wall tumours breaching the peritoneum, a diagnosis of abdominal wall soft tissue sarcoma with solitary liver metastasis was reached.

DIFFERENTIAL DIAGNOSIS
1. Recurrent Desmoid Tumour.
2. Abdominal wall soft tissue sarcoma.
The diagnosis of desmoid tumour was considered because of recurrent nature and long duration between first surgery and presentation of patient to outpatient department of general surgery implying slow growing tumour even though desmoids are common in women of child bearing age with or without history of trauma either surgical or otherwise.\(^1\)\(^2\)\(^3\) and because desmoid tumours were known to be hard poorly circumscribed lesions demonstrating a locally infiltrative growth quite often involving posterior abdominal wall fascia\(^1\) as was found in our case. Soft tissue sarcoma was considered based on age, gender of patient and MRI findings of various signal intensities within the tumour and invasion of peritoneum as revealed by loss of fat plane between posterior part of tumour and peritoneum and presence of mixed intensity lesion in right lobe of liver. Review of literature confirmed the premise that MRI is as good as HPE in revealing the different tumour components (fat, water, blood, melanin) thus providing information about the pathological nature of soft tissue tumour.\(^4\)

But based on intraoperative findings of infiltration of peritoneum and adherence to transverse colon and mesocolon (which could be released by careful cautery dissection) suggesting desmoplastic reaction, soft tissue sarcoma was considered.

**PATHOLOGICAL DISCUSSION**

FNAC was reported as possible desmoid tumour. Histopathological examination reported as high grade sarcoma probably rhabdomyosarcoma with differential diagnosis of metastasis from germ cell tumour of testis or hepatocellular carcinoma. Immuno histochemical marker with Heppar was weekly positive suggesting Hepatocellular carcinoma and advised clinical and radiological correlation. Grossly embryonal Rhabdomyosarcoma (which is the commonest type of rhabdomyosarcoma) appears as myxoid grey white mass. Histologically it consists of mixture of undifferentiated round cells and immature striated muscle like cells with abundant eosinophilic cytoplasm (Rhabdomyoblast). Grossly Desmoid tumours appear as grey white, firm poorly demarcated masses. They are rubbery and tough and can infiltrate the surrounding structures. Histologically it composed of plump banal fibroblast arranged in broad sweeping fascicles that infiltrate adjacent tissue. Regenerating muscles cells when trapped within these lesions may take on appearance of multinucleate giant cells. Regenerative muscles cells when trapped within these lesions may take on the appearance of multinucleate giant cells.\(^5\) In our case microscopic examination revealed tumour cells in solid sheets, nest like arrangement and also alveolar pattern of arrangement is seen. These solid sheets of tumours cells separated by thick fibrous septa infiltrated by lymphocytes. The finding in our case were matching neither with rhabdomyosarcoma nor desmoid tumours in entirely. This showed the limitation of pathologist in pinpointing the exact origin and nature of tumours. For every soft tissue sarcoma, a pathologist diagnoses, there are over 100 benign soft tissue lesion due to overlapping morphology of many benign and malignant lesions.\(^6\) Role of pathologist is limited by inability to conclusively differentiate between desmoid tumours and low grade fibrosarcoma.\(^1\)
DISCUSSION OF MANAGEMENT

Whatever the pathological diagnosis, surgical management of both desmoid tumours and soft tissue sarcoma is same; that is wide local excision including resection of involved structures as the prognosis and chances of recurrence depends on attaining negative margins.\textsuperscript{1,7} Adequate resection was limited in earlier times by unavailability of prosthetic materials for reconstruction of the large defect and hence required complex plastic surgical procedures like tissue flaps or any cutaneous flaps.

MRI helps us in defining exact extent of tumours and thus in planning the reconstruction of the defect following wide excision by appropriately sized dual mesh with inner polygalactide and outer polypropylene layer. Inner layer preventing adhesions to intestines and outer layer inducing a fibrous reaction resulting in strengthening of wall.

Thus, even though traditionally Surgeon, Radiologist and Pathologist were supposed to have equal role to play in management of abdominal wall tumour,\textsuperscript{2,8} We have found in our case Radiologist and Surgeon have a greater role than pathologist in managing large soft tissue tumours of abdominal wall as any tumour of $>$5cm has a high chance of being malignant.\textsuperscript{1,9} The only clear differentiating feature between desmoid tumour and soft tissue sarcoma is propensity for metastasis in the soft tissue sarcoma\textsuperscript{10} which requires Combined Chemotherapy (either doxorubicin or ifosfamide based) and Radiotherapy both external beam and brachytherapy.\textsuperscript{1}

FINAL DIAGNOSIS

Even though the microscopic features were ambiguous not favouring either rhabdomyosarcoma or desmoid tumour, immune-histochemistry was weakly positive for heppa antigen suggesting hepatocellular carcinoma and pathologist favouring the same after perusal of MRI report showing 23*21 mm lesion in right lobe of liver. We consider it to be the other way round: Recurrent abdominal wall soft tissue sarcoma with solitary liver metastasis in view of slow growing recurrent tumour and small solitary liver lesion which hasn’t increased in size even 2 months after surgery; which is unlikely in case of hepatocellular carcinoma with rapid growth and fatal outcome if untreated.

REFERENCES