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Case Report on Spindle Cell Tumor

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Abstract: ***Spindle cell tumor is very rare. Herein, we report a case of retroperitoneal spindle cell tumor in a 21 - year - old female. The patient first presented with a complaint of persistent pain in the left upper abdomen. CT scan was performed which showed a soft tissue density mass measuring 34x21x21 mm in anterior abdominal wall in left lumbar region. Then, a subsequent surgery was performed, and we completely removed the tumor. The tumor was histologically diagnosed as a spindle cell tumor. Therefore, it is imperative for us to enhance the understanding of this seldom found tumor. Surgery remains the best option for treatment.***

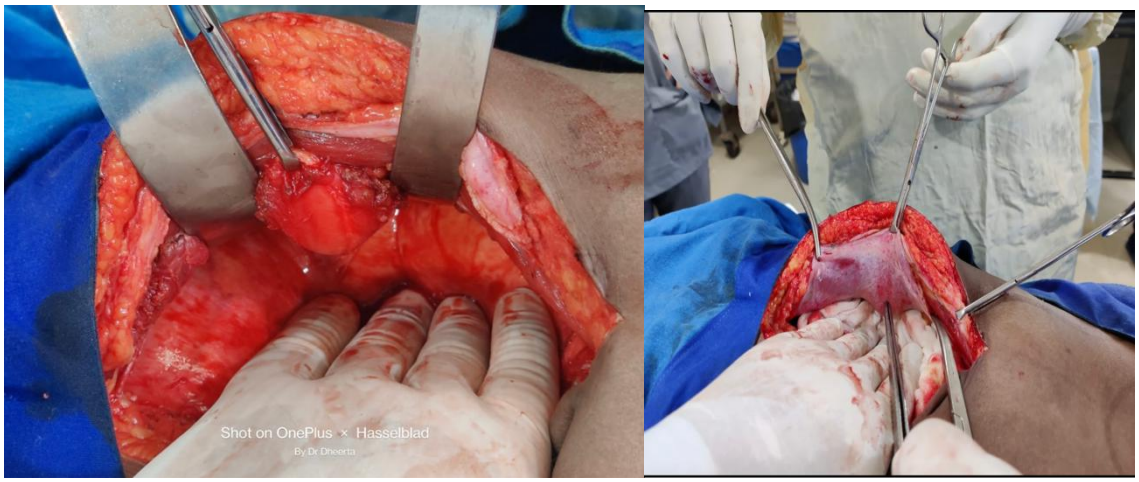
Keywords: Spindle Cell Tumor, abdomen, lumbar

1. Introduction

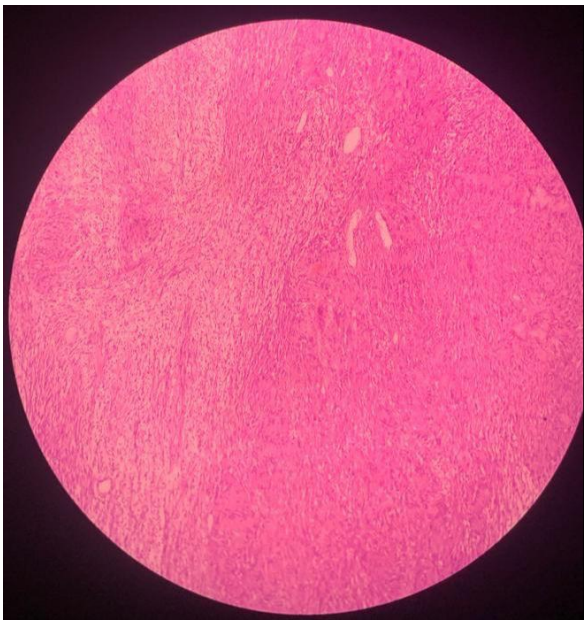
Various types of human tumors can present as spindle cells, such as poorly differentiated epithelial - derived tumors, gastrointestinal stromal tumors, mesenchymal tumors, and neurogenic tumors. Spindle cell tumor, characterized histologically by a mixture of fat cells and fibroblast - like spindle cells in a matrix of collagen and mucoid material, is rare, and its incidence is low and can occur in human soft tissue, bone, or in any part of the human body, such as the retroperitoneal space. Its morphological appearance can be carcinomatous or neoplastic. Herein, we are present a case of retroperitoneal spindle cell tumor to raise awareness on this seldom found tumor.

2. Case

A 21 year - old female patient presented with a complaint of persistent pain in the left upper abdomen since 2 years. There was no history of previous abdominal trauma, bleeding, or family history of cancer. On clinical examination, there was tenderness present in the left upper abdomen and a lump of about 3x2 cm, oval in shape was palpable in left hypochondriac 3 cm inferior to left subcostal margin in left midclavicular line. Enhanced upper abdominal computerized tomography (CT) showed a soft tissue density mass 34x21x21 cm in anterior abdominal wall. USG guided FNAC was done which was suggestive of spindle cell tumour. Further USG guided biopsy was done which confirmed the diagnosis of spindle cell tumour. Immunohistochemistry was done which showed vimentin, S100, and Actin positive and desmin, C - kit and DOG1 negative which favours the diagnosis of spindle cell tumour of neural origin schwannoma. There was no evidence of local or distant spread of the tumour which suggested that the tumour was benign. Wide local excision was performed with primary closure of defect in internal oblique muscle with posterior component separation with transverse abdominis muscle release with closure of posterior rectus and peritoneal complex with placement of ultrapro mesh. Histopathology came to be schwannoma. Post op period was uneventful and patient recovered well.



Intraoperative picture showing the tumor



HPE showing hypo and hypercellular areas - so called antoni A and antoni B suggestive of schwannoma

3. Discussion

Soft tissue tumors usually occur in the limbs. Therefore, abdominal soft tissue tumors, especially retroperitoneal spindle cell tumors are uncommon. Recently, there are still insufficient clinical research studies on spindle cell tumors. Spindle cell tumors, first reported by Weiss and Enzinger in 1896, originate from a variety of types of tumors, such as fibrosarcoma, gastrointestinal stromal tumor, and intra - abdominal desmoid tumor. Most of them occur at the young age of 20–40 years, occasionally appear in child, and their incidence has no significant differences between males and females. In 1994, the WHO officially classified spindle cell tumors as soft tissue neoplasms.

Due to the diversity of pathological morphology, it was once named after inflammatory pseudotumor. A previous article has reported that the biological behavior of the tumor cells is inert, and is associated with distant metastasis, and that their prognosis is well. Clinical examination, imaging, and histology are non - specific in the evaluation of the uncommon tumor and distinguish it from other solid masses. Thus, pathological and immunohistochemical tests are critical to the definitive diagnosis of this kind of tumor. β - Catenin has an imperative role in the development of the differential diagnosis of spindle cell neoplasms, particularly in the abdomen. In a prior study, Torres reported that β - catenin nuclear staining is probably the single most vital feature and is fundamental for the diagnosis. Meanwhile, the study by Carlson indicated that nuclear immunoreactivity for β - catenin is supportive for the diagnosis of this kind of lesion. Also, immunohistochemical staining of CD34 and CD117 antibodies can be performed for differential diagnosis. Another research found that the application of Ki - 67 for the identification of tumor cells with spindle cell morphologic characteristics of smooth muscle cells and fibroblasts is of great importance.

The management of retroperitoneal spindle cell tumors is complicated and based on their clinical biological behavior. In this case, CT is effective in detecting the soft tissue density mass located in enterocoelia, which was suspected of local lesion. Complete surgery is the main treatment for intra - abdominal spindle cell tumors. If the tumor invades other organs in the abdominal cavity, extensive radical resection may be carried out. In our case, the patient presented with a tumor with a maximum cross section diameter of 3.4 cm, but we successfully removed the tumor.

Recurrence rates as high as 20–68% have been reported even after negative - margin excision of desmoid tumors, and the prognostic significance of microscopic positive margin remains unknown. Through following the treatment model of surgically removing the entire tumor with an adequate tumor - free margin, we thoroughly detected the tumor and part of the invading lesions, and to date the patient has been free of recurrence since the surgery.

In conclusion, due to being a rare disease, much more studies on anterior abdominal wall spindle cell tumors are needed to enhance the management of this lesion. Complete resection is the gold standard for this kind of rare disease.

Conflict of interest: Nil declared

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