CASE REPORT

A Usual Schwannoma at an Unusual Site-The Mesorectum

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Abstract:

The aim of the article is to present a rare case of mesorectal schwannoma diagnosed by fine needle aspiration cytology in a 36 year old man. Schwannomas are benign encapsulated tumors arising from Schwann cells of motor and peripheral nerves. They commonly present on the head, neck and trunk and on rare occasion arise in the retroperitoneum and in the lumbosacral region. It is however quite uncommon for a schwanomma to originate in the mesorectum. In evaluating such cases, FNAC provides a safe and effective method to resolve the great diagnostic dilemma.

Keywords: Schwannoma, Mesorectum, Computed Tomography, FNAC

Introduction:

Schwannomas also popularly known as neurilemmomas by many authors are encapsulated perineural tumours which are usually benign in nature. They are neuroectodermal in origin and frequently occur in females in the second to fifth decade. In the hierarchy of soft tissue tumours, 5% of all benign soft tissue tumours are comprised by schwannomas which commonly occur in the head and neck [1-3] ,trunk and flexor surfaces of the upper and lower extremities [4]. Mesorectal schwannoma is rare and among all benign schwannomas accounts for less than 1% cases [5]. Ipso facto the overlapping clinical manifestations and meagre information on its unusual occurrence makes it a perfect example of a great diagnostic challenge. Pre-operative diagnosis is an issue and the challenges encountered during diagnosis in radiology are easily and effectively sorted out by a simple procedure of fine needle aspiration.

Case Report:

We present a case of 36 year old man who presented with a history of left gluteal mass of two months duration. The patient complained of urinary disturbances but no history of urgency in defecation or erectile dysfunction. General physical examination was within normal limits. No organomegaly was detected. Lab examinations identified no abnormalities in his routine and microscopic urine analysis, complete hematological investigations, kidney function test and tumour markers. Computed Tomography scanning (Fig.1) of whole abdomen (with oral and I.V non ionic contrast) revealed 16x14x10cms solid retroperitoneal mass with necrosis seen in the pelvis causing impression on posterior wall of urinary bladder and compressing it. Both ureters were displaced anteriorly and laterally by the mass. Rectum was displaced to the right by mass and the soft tissue tumour seemed inseparable from seminal vesicle glands. Enlarged lymph nodes and free fluids were not present. All bowel loops under review were normal in course and calibre.

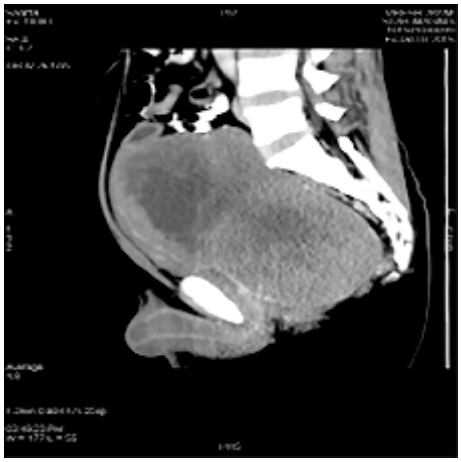
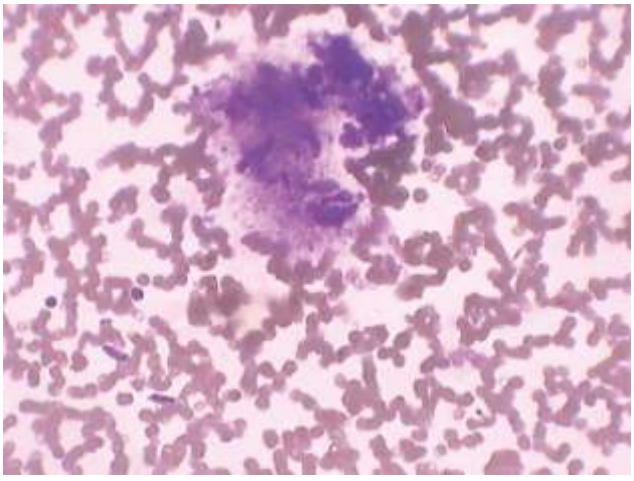


Fig.1: shows 16x14x10cms Huge Soft Tissue Mass Compressing the Bladder and Rectum

CT-Guided Fine Needle Aspiration Cytology of the retroperitoneal mass was done which showed tissue fragments of spindle cells separated by fibrillar stroma along a background of RBCs. The nuclei were long and slender with pointed ends and uniformly bland chromatin pattern (Fig. 2 and 3).

Blunt dissection of the mass was done and the excised specimen was sent for histopathological evaluation and reporting. The operation was uneventful. Grossly, a well encapsulated mass measuring 16x14x10cms was received. The external surface was smooth. Cut section was gray-white and solid. Microscopically, the lesion was a benign spindle cell lesion showing orderly nuclear palisading along with Verocay bodies and inter mixed Antoni A and Antoni B areas. There was no nuclear pleomorphism, degenerative changes, atypia or necrosis (Fig 4 and 5). Typically, the cells showed positivity for S100 and immunohistochemical analysis for CD34, NFP and EMA was negative. (Fig 6)



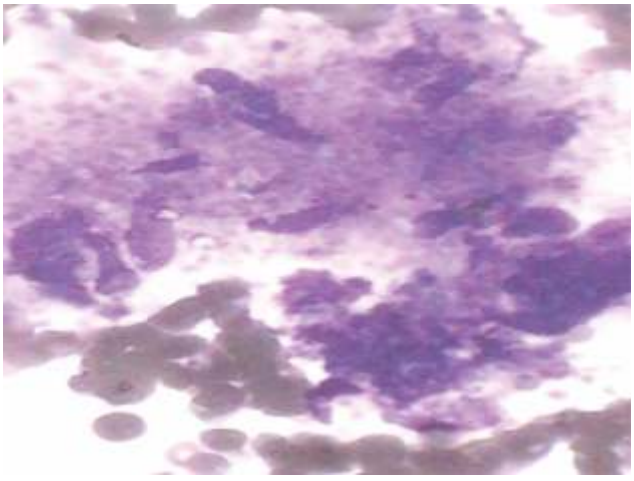
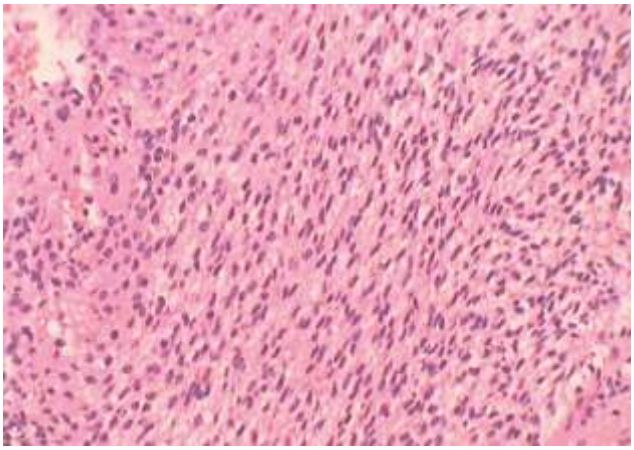


Fig. 2 & 3: 40X and 100X of FNAC Aspirate showing Spindle Cells Separated by Fibrillar Stroma



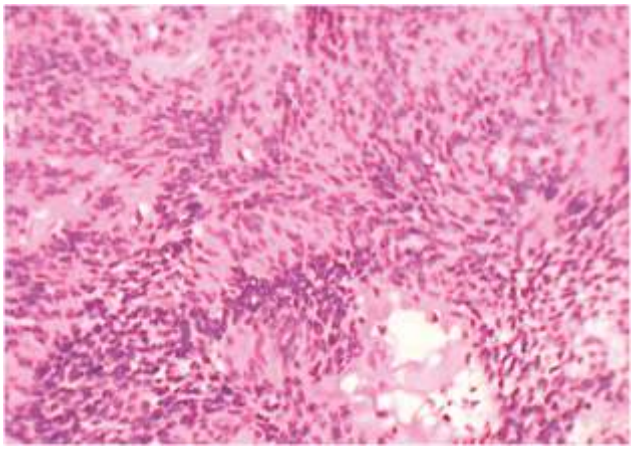


Fig. 4 and 5: Benign spindle cell lesion showing orderly nuclear palisading, Verocay bodies, inter mixed Antoni A and Antoni B areas

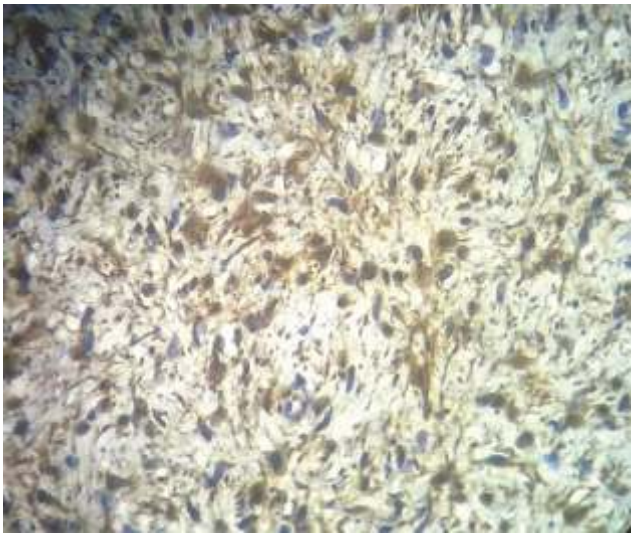


Fig. 6: Strong Positivity for S100

Discussion:

Schwannoma are benign neoplasms of schwann cells, which most commonly occur in females between second and fifth decade [6]. It is classified in six types as usual type, cellular, plexiform,ancient, epithelioid and neuro-blastoma like [7]. Schwannomas are solitary neoplasms of superficial or deep soft tissues,arising from peripheral nerves of the four extremities, trunk, head and neck, cranial nerve roots, cervical nerves, dorsal spinal nerve roots,posterior mediastinum and retroperitoneal regions [6].

Clinical history, histopathological evaluation and immuno-histochemical interpretation are all necessary to resolve the diagnostic dilemma of a usual schwannoma presenting at an unusual site such as the mesorectum. Pre-surgical diagnosis is a crucial point especially when the discrimination

of a schwannoma from soft tissue tumours like fibrosarcomas or liposarcomas comes into consideration. Identifying the benign forms from malignant ones also requires great expertise [8]. As reported in literature,the differential diagnosis of a mesorectal schwannoma include psoas abscesses, pancreatic cysts, neoplasms, adnexal masses, adrenal, kidney or hepatic tumours [9-11]. Radiological imaging is helpful in evaluating the tumour's size, location, and possible invasion of other structures. Fine-needle aspiration cytology on the other hand serves an accurate and effective presurgical diagnostic tool of this rare entity. Schwannomas of long duration undergo fatty degenerative changes and with diffuse areas of hypocellularity are termed ancient schwannomas [12].

Conclusion:

Mesorectal Schwannomas owing to its rarity are less likely encountered neoplasms in medicine and surgical practice making them lesions of great diagnostic challenge. Histopathological evaluation and immunohistochemical analysis have a pivotal role in final diagnosis of schwannoma. Complete surgical excision is recommended. Recurrences and malignant transformations are rare.

References

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