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LAPAROSCOPIC RESECTION OF BENIGN RETROPERITONEAL SCHWANNOMA OF LATERAL FEMORAL CUTANEOUS NERVE OF THE THIGH: A CASE REPORT

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ABSTRACT

Schwannoma is also known as a neurinoma or neurilemoma. Schwann cells, which provide the insulating layer around the peripheral nerves, cause this specific type of nerve sheath tumour to develop. They may spread to nerve roots or nearby peripheral nerves. A Twenty-nine years old male presented to the OPD of general surgery with an asymptomatic retroperitoneal mass that was found during a regular medical check-up and imaging studies. Patient had given complaints of right lower abdominal pain 3 months ago which was initially judged as subacute appendicitis. No complaints of nausea/vomitings. No bowel/bladder complaints. Investigations revealed the presence of an enhancing solid mass lesion in right iliac region inferior to the caecum, most likely a benign neurogenic spindle cell tumor/ mesenchymal tumour arising from lateral femoral cutaneous nerve of thigh. He underwent successful Laparoscopic resection of retroperitoneal schwannoma with appendicectomy.

Keywords: Retroperitoneal Schwannoma, Laparoscopic resection, Asymptomatic.

INTRODUCTION

Sarcomas make up the majority of retroperitoneal tumours (approximately 1%–15% of all adult and paediatric neoplasms), along with other benign and malignant lesions. The majority of benign retroperitoneal tumors—about 40% of all cases—are discovered accidentally and are far less common than retroperitoneal sarcomas. The benign pathologies that are most frequently observed in the retroperitoneum are fibromatosis, benign neurogenic tumours (schwannomas, neurofibromas), and renal angiomyolipomas.

Schwannoma is a soft tissue tumour that develops from Schwann cells in the peripheral nerve sheath. As a result, it can manifest in any Schwann cell of the nervous system, including the trunk and extremities, but relatively rarely (approximately 0.3%–3.2% of all schwannomas) arises in the retroperitoneum area. We describe a case of a 29-year-old man who developed a retroperitoneal lump that was subsequently determined to be a Schwannoma.

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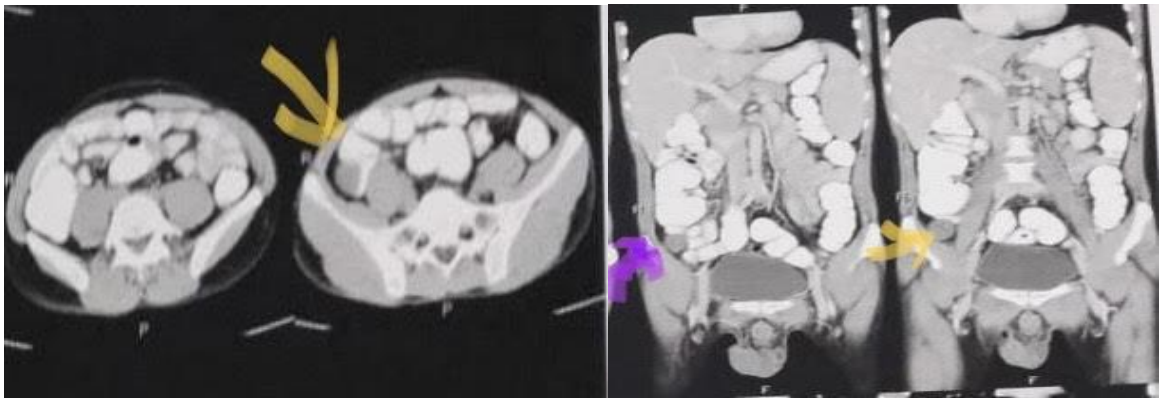
Patients typically have vague symptoms when they first arrive. On a radiologic evaluation, there are no pathognomonic characteristics. Due to the potential for complications, preoperative biopsy is not advised; yet, surgery is required for both diagnosis and therapy. The majority of schwannomas are benign tumours, however those connected to von Recklinghausen illness are cancerous. On pathologic examination, schwannomas show areas of high and low cellularity, referred to as Antoni A and Antoni B areas, with a diffuse positivity of S100 protein. These tumours are known as ancient schwannomas if they exhibit degenerative features such cyst development, bleeding, calcification, and hyalinization.

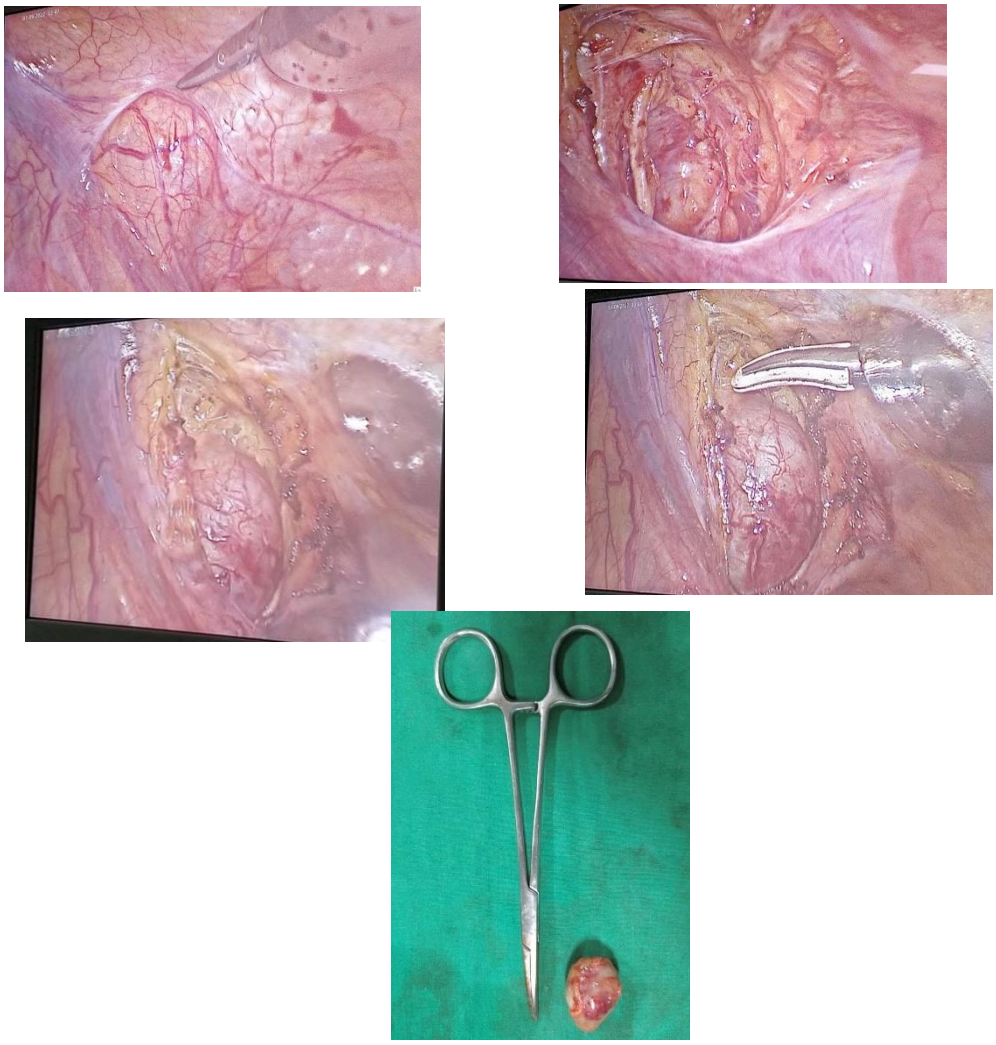
CASE PRESENTATION

A 29-year-old male patient was referred to the surgery clinic for evaluation of the right retroperitoneal mass that had been previously identified by abdominal ultrasonography examination. The chief complaint was intermittent pain in the middle to lower right abdomen for the past three months. The patient was previously diagnosed with sub-acute appendicitis. On physical examination, no tenderness or mass was found in palpation. All laboratory examinations, including blood exam, kidney function and urinalysis, were within normal limit. On abdominal ultrasound examination, a well-defined hypoechoic lesion of 28*28*36mm with a volume of 15.6 cc with few vascular foci within was found, suggestive of a retroperitoneal schwannoma with sub-acute appendicitis. On abdominal CT-scan with contrast, a well-defined heterogenous ovoid soft tissue density lesion measuring 2.5*2.8*2.9 cm (TR*CC*AP) is noted in the right para-colic gutter adjacent, overlying the iliacus muscle at, just lateral to the tip of the appendix and postero-inferior to the caecum. No obvious hemorrhage/calcification seen. On post contrast images, this lesion shows heterogenous enhancement with central non enhancing areas. Fat planes of the mass with adjacent muscles and bowel wall are maintained could be suggestive of neurogenic tumour, likely arising from lateral femoral cutaneous nerve of thigh-could represent benign lesion-spindle cell tumour/mesenchymal tumour.



The patient subsequently underwent laparoscopic excision of schwannoma with appendicectomy. During the procedure, a mass was found on the retroperitoneal area of the right lower abdomen with size 3 x 3 x 3.5 cm. The encapsulated mass was separated from the surrounding tissue, then excised from the retroperitoneum.

ISSN 2515-8260 Volume 09, Issue 09, 2022



The histopathological examination – HPE suggestive of Benign spindle cell tumour, features favouring schwannoma.

Post-procedure, the patient condition – Stable, with no complaints. Was discharged on post procedure day 3 and is kept on regular follow up.

DISCUSSION

Retroperitoneal schwannoma is a benign solid tumour that develops from the paravertebral area. Schwannoma is a single, well-bordered tumour with a soft surface under the microscope. Histologically, schwannoma was made up of Schwann cells with Antoni A and Antoni B—hypercellular and hypocellular regions—and positive S100 protein diffusion. The ancient retroperitoneal schwannoma subtype is identified by the presence of degenerative features like cyst development, haemorrhages, calcification, and hyalinization.

The retroperitoneal space is flexible, allowing the retroperitoneal schwannoma to slowly grow to a large size without encroaching on nearby structures. As a result, the retroperitoneal schwannoma frequently goes unnoticed clinically in its early stages until it begins to suppress

the nearby organs. In addition to abdominal pain, non-specific gastrointestinal diseases such pain during faeces, as well as other symptoms like hematuria and recurring renal colic, were the main complaints of retroperitoneal schwannoma. The presenting symptom in our situation was sporadic pain in the middle to lower right abdomen.

Abdominal ultrasound (US), CT scans, and MRI are the imaging techniques used to find retroperitoneal schwannoma. Ultrasound imaging in our case reveals a clearly defined hypoechoic with minimal vascular foci. A soft tissue density lesion in the right paracolic gutter on a CT scan had the telltale signs of a benign schwannoma, including homogeneous isodense lesions, a solitary mass, and modest enhancement. Biopsies and CT-scan guided fine-needle aspiration biopsy may be used to confirm the diagnosis. However, due to the increased risk of bleeding, infection, and tumour spreading, these procedures are not advised prior to surgery.

The optimum treatment for retroperitoneal schwannoma is total excision, which may also include nearby tissue if necessary. However, other research indicated that due to a rare malignant change of retroperitoneal schwannoma, simple enucleation or partial excision was sufficient. Because imaging examinations revealed indications of a benign retroperitoneal tumour, we did laparoscopic complete excision of schwannoma without excision of neighbouring tissue in our first experience.

Retroperitoneal schwannoma often has a fair prognosis, with recurrence occurring in 5–10% of patients, probably as a result of insufficient excision. Typically, six to twelve months after surgery, a CT scan or MRI imaging test was required. To evaluate our practise, more research is still required.

CONCLUSION

The clinical diagnosis of retroperitoneal schwannoma is frequently incorrect or missed altogether. The diagnosis can be confirmed by imaging techniques and a post-operative histological study. However, there is still debate about the requirement of a negative tissue margin during surgical treatment.

REFERENCES

1. Spiess P.E., Leibovici D., Pisters L.L. In: Wein A.J., Kavoussi L.R., Partin A.W., Peters C.A., editors. Elsevier; Philadelphia: 2016. Retroperitoneal Tumors; pp. 1403–1404. (Campbell-walsh Urology eleventh ed.). [Google Scholar]

2. Goh B.K., Tan Y.M., Chung Y.F., et al. Retroperitoneum schwannoma. Am J Surg. 2006;192:14–18. [PubMed] [Google Scholar]

3. Song J.Y., Kim S.Y., Park E.G., et al. Schwannoma in the retroperitoneum. J Obstet Gynaecol Res. 2007;33:371–375. [PubMed] [Google Scholar]

ISSN 2515-8260 Volume 09, Issue 09, 2022

4. Meşină C., Mogoantă S.Ş., Cristian D.A., et al. Retroperitoneal ancient schwannoma - case presentation. Rom J Morphol Embryol. 2015;56(4):1517–1522. [PubMed] [Google Scholar]

5. Çalişkan S., Gümrükçü G., Kaya C. Retroperitoneal ancient schwannoma: a case report. Rev Urol. 2015;17(3):190–193. [PMC free article] [PubMed] [Google Scholar]

6. Guo YK, Yang ZG, Li Y, et al. Uncommon adrenal masses: CT and MRI features with histopathologic correlation. Eur J Radiol. 2007;62:359–370. [PubMed] [Google Scholar]