

An Unusual Case of an Elderly Patient with Retroperitoneal Schwannoma

Shrirang Vasant Kulkarni¹, Bhim Bala², Vishesh Vashishtha², Abhijit Lal¹

¹Consultant Surgery, Department of Surgery, 7 Air Force Hospital, Kanpur, Uttar Pradesh, India, ²Assistant Professor Surgery, Department of Surgery, 7 Air Force Hospital, Kanpur, Uttar Pradesh, India

Abstract

Schwannoma is a soft tissue tumor that seldom develops in the retroperitoneum area and is caused by Schwann cells. The retroperitoneal schwannoma may develop gradually and reach a significant size without exhibiting any particular clinical signs or symptoms. We report a 72 year old lady known case of Hypertention, Type -2 DM, with the complain of pain abdomen medially and in left lower abdomen since 5 months. On evaluation through radiologically and pathologically, she found to have well defined heterogeneously enhancing left para aortic lesion - likely enlarged retroperitoneal lymph node. Complete Laproscopic total excision biopsy was performed with histological findings showed Schwannoma with features of Ancient changes.

Key words: Laproscopic, Oncology, Retroperitoneal, Schwannoma

INTRODUCTION

Schwannomas are neuroectodermal tumors that usually affect nerves in the head, neck, and extremities. Retroperitoneum is an uncommon location and accounts for approximately 3% of all schwannomas,^[1] while 4% of all retroperitoneal tumors are schwannomas.^[2] They are primarily benign; however, malignant forms have been reported in up to 60% of patients with Von Recklinghausen's disease.^[3] Ninety per cent of schwannomas are solitary, although 4% are associated with neurofibromatosis type 2^[4-6] The clinical presentation is usually vague, and the therapeutic approach is influenced by the pre-operative evaluation, the size, and location of the mass, and the surgeon's preference. In this case report, we describe a patient with a retroperitoneal mass which was resected laparoscopically and confirmed to be an ancient schwannoma histopathologically.

CASE REPORT

A 75-year-old lady patient known to be hypertensive and diabetic presented with complaints of recurrent, dull

aching pain in the middle to lower left abdomen for the past 5 months.

On physical examination, vital parameters were within normal limits and no tenderness or mass was palpable. All hematological and biochemical analyses were within normal limits.

On abdominal ultrasound (US) examination, an oval hypoechoic lesion measuring 3 cm in diameter near the inferior pole of the left kidney in the paravertebral location was seen, suggestive of a retroperitoneal lymph node.

On abdominal computed tomography (CT)-scan with contrast, a well-defined heterogeneously enhancing left paraaortic lesion, measuring 26.7 × 26 × 37 mm (AP × TR × CC) extending from the axial level of the inferior endplate of LV2 till the body of LV3 was seen. No cystic/necrotic areas were seen within. The lesion showed preserved fat planes with the adjacent bowel loops, aorta, and adjacent vertebral bodies.

The upper and lower GI-endoscopies did not reveal any primary pathology. In view of a suspected retroperitoneal lymph node mass with unknown primary pathology whole body 18-F fluorodeoxyglucose (FDG) positron emission tomography CT Scan was done, which showed FDG-avid heterogeneously enhancing abdominal left paraaortic lymph node. No possible site of any other metabolically active primary malignancy could be seen. A CT-guided

Access this article online



www.ijss-sn.com

Month of Submission : 10-2025
Month of Peer Review : 11-2025
Month of Acceptance : 12-2025
Month of Publishing : 12-2025

Corresponding Author: Dr. Bhim Bala, Assistant Professor Surgery, Department of Surgery, 7 Air Force Hospital, Kanpur, Uttar Pradesh, India.

core needle biopsy of the lesion was undertaken which showed it to be a low-grade neural tumor favoring Schwannoma.

With this pre-operative work-up, she was taken up for laparoscopic resection, an encapsulated 3 × 3 cm mass was found near the left lower pole of the kidney medial to the ureter. The mass was resected in-toto.

The histopathological analysis revealed a 3 cm tumor mass that was encapsulated and well-defined. Areas of both hypercellular and hypocellular material could be seen. The tumor mass was arranged in a bell-shaped swirling pattern, characterized by spindled, oval, wavy nuclei that exhibited mild pleomorphism, hyperchromasia, in eosinophilic cytoplasm. In addition, a palisade nuclear appearance was noted, along with microcystic regions. Numerous hyalinized blood vessels with a myxoid background were observed, and these characteristics were in line with those of an ancient schwannoma. After 1-year post-surgery, she remains asymptomatic and on regular follow-up outpatient department visits.

DISCUSSION

Retroperitoneal schwannoma is a solid, encapsulated, benign tumor that arises from the paravertebral region. Macroscopically, a schwannoma presents as a soft, solitary mass and a well-defined border. Histologically, it comprises Schwann cells organized into hypercellular and hypocellular regions termed Antoni A and Antoni B, respectively, with the presence of S100 protein diffusion. The occurrence of degenerative changes, such as cyst formation, hemorrhage, calcification, and hyalinization, indicates a subtype of retroperitoneal schwannoma referred to as ancient retroperitoneal schwannoma. This type of schwannoma can grow gradually to a large size without infiltrating nearby structures, making it often undetected in the initial stages until it compresses surrounding organs, leading to vague symptoms, such as abdominal pain, hematuria, and recurrent renal colic. In our case, the primary symptom was dull-aching recurring pain in the middle to lower left abdomen.

Various imaging done for identifying retroperitoneal schwannoma include abdominal US, CT scans, and magnetic resonance imaging. On US, a homogeneous, well-defined, and poorly vascularized image may be observed, while other assessments might reveal a central necrotic, heterogeneous cystic area. The CT scan can reveal a cystic mass featuring central necrosis. In this case, the abdominal US indicated a hypoechoic lesion at the lower pole of the left kidney positioned in the paravertebral region,

whereas the CT scan provided with the same information. To establish a diagnosis, we performed a CT-guided core needle biopsy; however, many studies do not recommend preoperative tissue biopsy due to elevated risks of bleeding, infection, and tumor spread.^[7] The effective treatment for retroperitoneal schwannoma is total excision.^[2-5] However, other studies have indicated that simple enucleation or partial resection could also be adequate due to the uncommon occurrence of malignant transformation in retroperitoneal schwannomas.^[7] It is important to mention that the laparoscopic approach is feasible and only a few cases are reported in the literature.

At our center, we performed laparoscopic total resection of a schwannoma without excision of adjacent tissue because imaging studies showed features of a benign retroperitoneal tumor.

Retroperitoneal schwannoma typically has a favorable prognosis, with recurrence rates between 5% and 10%, which may occur due to incomplete removal.^[8] There was no sign of recurrence after 1 year of follow-up.

CONCLUSION

Schwannomas are tumors originating from neuroectodermal tissue and are infrequently found in the retroperitoneal area. The retroperitoneal schwannomas show an insidious onset, slow progression, and may reach a significant size without displaying specific clinical signs or symptoms. The importance of maintaining a high index of suspicion, utilizing imaging to evaluate size and location, and obtaining histopathological confirmation through complete surgical resection remains pivotal in the management.

DATA AVAILABILITY

All data underlying the findings are fully available.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

No institutional ethics committee approval was required for this case report by the Department because no data were collected from other institution or Hospital.

CONSENT FOR PUBLICATION

The patient has given written consent to use her personnel data, for the publication of this case report and any accompanying non-identifiable images.

STATEMENT OF HUMAN AND ANIMAL RIGHTS

The study has been performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards. This case report does not contain any studies with animals performed by any of the authors.

REFERENCES

1. Daneshmand S, Youssefzadeh D, Chamie K, Boswell W, Wu N, Stein JP, *et al.* Benign retroperitoneal schwannoma: A case series and review of the literature. *Urology* 2003;62:993-7.
2. Felix EL, Wood DK, Das Gupta TK. Tumors of the retroperitoneum. *Curr Prob Cancer* 1981;6:1-47.
3. Sengar Hajari AR, Tilve AG, Kulkarni JN, Bharat R. Malignant peripheral nerve sheath tumor of the uterine corpus presenting as a huge abdominal neoplasm. *J Can Res Ther* 2015;11:1023.
4. Mastoraki A, Toska F, Tsiverdis I, Kyriazi M, Tsagkas A, Danias N, *et al.* Retroperitoneal schwannomas: Dilemmas in diagnostic approach and therapeutic management. *J Gastrointest Cancer* 2013;44:371-4.
5. Ozawa H, Kokubun S, Aizawa T, Hoshikawa T, Kawahara C. Spinal dumbbell tumors: An analysis of a series of 118 cases. *J Neurosurg Spine* 2007;7:587-93.
6. Harada TL, Nagao G, Aoyagi T, Kuroda I, Tokuyama N, Takahashi M, *et al.* Giant retroperitoneal schwannoma in a 52-year-old man. *Radiol Case Rep* 2018;13:810-4.
7. Goh BK, Tan YM, Chung YF, Chow PK, Ooi LL, Wong WK. Retroperitoneal schwannoma. *Am J Surg* 2006;192:14-8.
8. Song JY, Kim SY, Park EG, Kim CJ, Kim DG, Lee HK, *et al.* Schwannoma in the retroperitoneum. *J Obstet Gynaecol Res* 2007;33:371-5.

How to cite this article: Kulkarni SV, Bala B, Vashishtha V, Lal A. An Unusual Case of an Elderly Patient with Retroperitoneal Schwannoma. *Int J Sci Stud* 2025;13(9):3-5.

Source of Support: Nil, **Conflicts of Interest:** None declared.