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Diagnostic Difficulty in Retroperitoneal Mass: A Case Report

Mariana Y Gallosa*, Richard I Cevallos, Andrés E Ochoa, Juan A Gutiérrez and Hugo D Ruiz

General Surgery Service Teaching Polyclinic, Autonomous City of Buenos Aires, Buenos Aires, Argentina

Abstract

Schwannoma, a benign tumor that arises from Schwann cells of the perineural nerve sheath, is often incidentally detected in imaging tests and mainly diagnosed by computed tomography (CT) scan. Treatment consists of surgical resection with clear margins. We present the case of a 49-year-old female patient subject to oncology department follow-up due to an underlying disease, left breast cancer. A large, hypermetabolic, non-cystic mass in the retroperitoneal region is identified by CT and positron emission tomography (PET)/CT scan in the left lateral aortic area. A percutaneous biopsy is requested. Due to the limited acoustic window, complete resection of the mass is decided. Final histopathology diagnosis of schwannoma. No adjuvant treatment indication undergoing favorable postoperative progress, without recurrence.

Keywords: Differential diagnosis, Retroperitoneal mass, Schwannoma

Correspondence to: Mariana Y Gallosa, General Surgery Service Teaching Polyclinic, Autonomous City of Buenos Aires, Buenos Aires, Argentina.

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Introduction

Retroperitoneal masses may have multiple origins, such as initial diagnoses, nodal metastasis, and lymphoproliferative disorders, which require ruling out primary diseases. Retroperitoneal nerve sheath tumors constitute 10 - 20% of primary retroperitoneal tumors, including schwannomas, neurofibromas, neurofibromatosis, and malignant nerve sheath tumors [1]. Compared to mesenchymal tumors, neurogenic tumors occur in younger age groups, are more likely to be benign, and have a better prognosis [2]. Schwannoma, also known as neurilemoma, originates from the perineural sheath of the Schwann cell and represents 6% of retroperitoneal neoplasms. It is more common than neurofibroma, and the gender frequency radio shows a higher prevalence in women (2:1) between the ages of 20 and 50 [3].

Case Presentation

We present the case of a 49-year-old female patient with a history of G2C2, exploratory laparotomy for acute salpingitis and purulent peritonitis, quadrantectomy, and axillary lymphadenectomy due to invasive carcinoma of the left breast on 21st April 2021, without current treatment.

During imaging follow-up with the attending oncologist, a chest, abdominal, and pelvic CT scan is requested, which identifies a large non-nodular image of heterogeneous soft tissue density in the left lateral aortic area at retroperitoneal level, which is suggestive of lymphadenopathy. Its approximate size is 52 × 48 mm in the transverse and anteroposterior diameters, respectively. This lymphadenopathy is located anterior to the left psoas muscle at the level of the 2nd, 3rd, and 4th lumbar vertebrae (Figure 1). Not observed in previous screening.

A PET/CT scan is requested, which identifies a solid hypermetabolic mass measuring 54 × 49 × 61 mm, extending from the left lateral aortic area at retroperitoneal level to the ipsilateral common iliac chain. The radiotracer shows heterogeneous distribution with areas reaching SUVmax of 5.9. Additionally, a hypermetabolic right external iliac lymphadenopathy measuring 9 × 9 mm with SUVmax of 5.6 is identified. The rest of the test shows normal uptake (Figure 2).

The patient did not report any symptoms, making the retroperitoneal mass an incidental finding. An imaging-guided biopsy was planned but could not be performed for technical and/or administrative reasons.

In an interdisciplinary committee, surgical intervention was decided based on the characteristics of the mass and the suspected malignant lymph nodes. Initially, a laparoscopic approach was attempted, but then it turned into a mini laparotomy. Excision of the retroperitoneal tumor in the region of the angle of Treitz and left para-aortic area was performed, confirming successful tumor removal and subsequent good

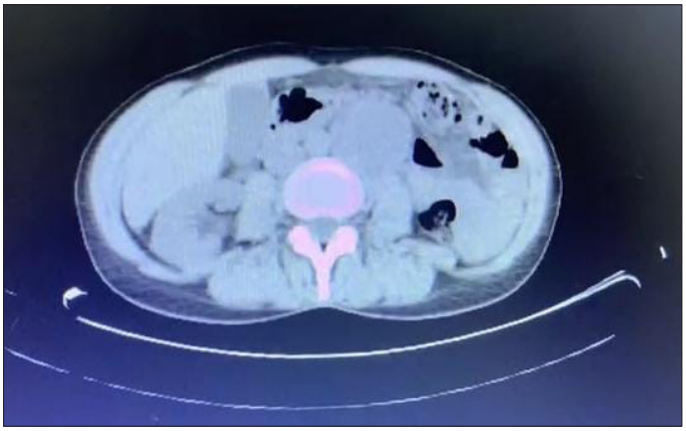

Figure 1: Computed axial tomography. In the left lateral aortic area at retroperitoneal level, a large non-nodular image of heterogeneous soft tissue density suggestive of lymphadenopathy is observed.

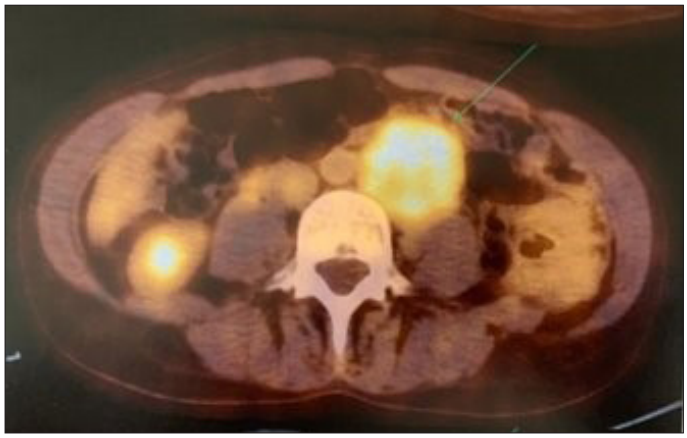

Figure 2: PET/CT scan reveals a hypermetabolic solid mass in the left lateral aortic area at retroperitoneal level, extending to the ipsilateral common iliac chain.

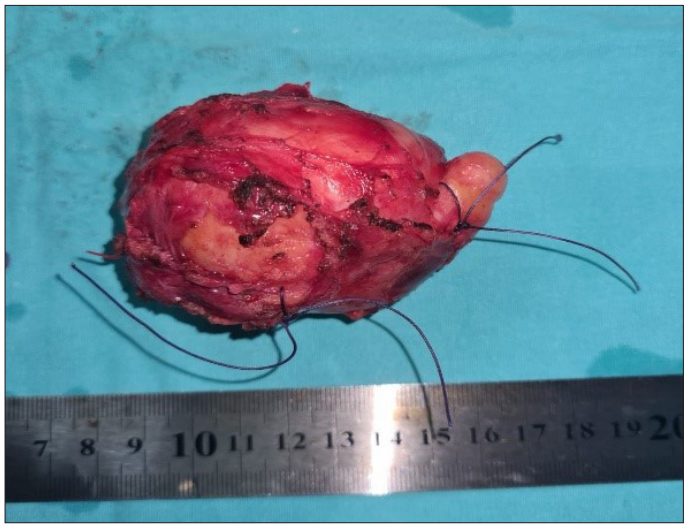

Figure 3: Specimen.

perfusion of hollow viscera (Figure 3 and figure 4). The patient had an uneventful postoperative course for 48 hours and was discharged. The pathology report revealed a benign schwannoma [4].

Currently, the patient is under follow-up by the oncology department and has a good performance status.

The purpose of this report is to present differential diagnoses for retroperitoneal masses of multiple origins. In the case of this patient, who has a recent diagnosis of breast cancer, it is important to consider the differential diagnosis of nodal metastasis. The CT and PET scan reports indicated that the origin was retroperitoneal lymphadenopathy. The first treatment option is an image-guided biopsy followed by diagnostic laparoscopy and exploratory laparotomy.

The retroperitoneum is a flexible space where tumors can grow to large sizes without causing any symptoms [5], as in this patient. They are often incidentally detected in imaging studies, and a pathological diagnosis should be considered in addition to patient follow-up [3]. The main imaging method for diagnosis is contrast-enhanced CT, followed by magnetic resonance imaging. The treatment of choice for primary retroperitoneal tumors is surgical resection with clear margins, either through laparoscopic or open laparotomy procedures, due to their high

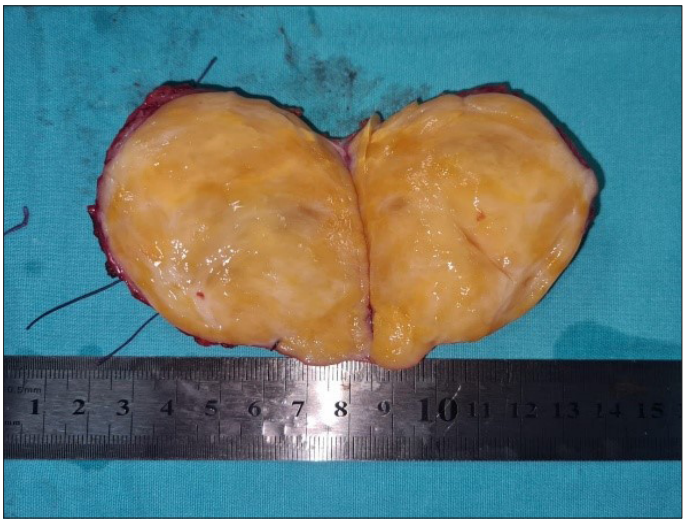

Figure 4: Surgical specimen opening.

potential for malignancy and low rates of recurrence [5].

Discussion

Retroperitoneal tumors may have multiple origins, and it is important to consider the differential diagnosis between primary tumors and nodal metastasis.

Schwannoma is considered one of the most common retroperitoneal tumors of neural origin [5]. It often occurs in females within the age group of 20 - 50 years and is typically asymptomatic. The diagnosis and treatment of schwannoma are usually based on three fundamental pillars. The first pillar is imaging, with CT scan being the primary method used for diagnosis. This is followed by a biopsy of the mass for histopathological diagnosis, which can be done through laparoscopic or conventional approaches, and then treatment, which typically involves complete resection of the mass with clear margins. This is due to the low rate of recurrence and favorable prognosis.

This case study is significant in the context of being a patient with breast cancer. According to epidemiological data, there are 64.7 new cases diagnosed per 100,000 inhabitants in Argentina, and it is estimated that 1 in 8 women will develop this disease. The main sites of metastasis for breast cancer are the bone, liver, lungs, and brain [6]. However, the possibility of developing retroperitoneal metastasis is extremely rare, and there are few cases reported in the scientific literature. Nodal metastasis should be suspected; in this case, it turned out to be a retroperitoneal tumor originating from the Schwann sheath.

Acknowledgements

None.

Conflict of Interest

None.

References

1. Ameur A, Lezrek M, Jira H, el Alami M, Beddouch A, et al. (2002) Giant solitary retroperitoneal neurofibroma. Prog Urol 12: 465-468.
2. Rajiah P, Sinha R, Cuevas C, Dubinsky TJ, Bush WH, et al. (2011) Imaging of uncommon retroperitoneal masses. Radiographics 31: 949-976. https://doi.org/10.1148/rg.314095132

3. Saito H, Suda T, Kobayashi M, Matsushita E (2021) Neurofibroma in the retroperitoneum associated with neurofibromatosis type 1. BMJ Case Rep 11: 1-2. https://doi.org/10.1136/bcr-2021-244364

4. Garcia M, Lehmann C, Rios D, Prada N, Lopez H, et al. (2015) Retroperitoneal tumors: 11 years experience in a cancer reference center in a Latin-American country (2000–2011). Rev Colomb Cancerol 19: 61-70. https://doi.org/10.1016/j.rccan.2015.01.003

5. Mateu CA, López GAC, Antequera CA (2018) Retroperitoneal schwannoma. Rev Esp Enferm Dig 110: 597-598. https://doi.org/10.17235/reed.2018.5569/2018

6. Franco GF, Medina A, Calafat P, Escobar H, Irico S, et al. (2021) Unusual presentation of breast cancer with metastasis in retroperitoneal lymph nodes. Rev Fac Cien Med Univ Nac Córdoba 78.