Osmangazi Journal of Med, 2025;47(4):643-647
DOI: 10.20515/otd.1631781

Case Report
Olgu Sunumu

Osmangazi Journal of Medicine
e-ISSN: 2587-1579

Schwannoma Masquerading As A Pathologic Lymph Node in A Patient with Colon Adenocarcinoma: A Case Report

Kolon Adenokarsinom Tanılı Hastada Patolojik Lenf Nodu Olarak Maskelenen Schwannoma: Olgu Sunum

Orkhan Ulfanov ,Yavuz Selim Angin, Gökberk Alagaş, Murat Ulaş

Department of General Surgery, Eskisehir Osmangazi University, Faculty of Medicine, Eskisehir, Türkiye

ORCID ID of the authors
OU. 0009-0006-4994-8419
YAS. 0000-0001-5315-8360
GA. 0000-0003-4143-5257
MU. 0000-0002-3507-8647

Correspondence / Sorumlu yazar:
Orkhan ULFANOV

Department of General Surgery, Eskisehir Osmangazi University, Faculty of Medicine, Eskisehir, Türkiye

e-mail: orxanulfanov@gmail.com

Abstract: Presacral schwannomas are rare, usually asymptomatic, and benign tumors. In this case report, a 57-year-old male patient was found to have a presacral schwannoma during follow-up after undergoing surgery for colon cancer. Initially, the lesion was considered to be a lymph node metastasis, but histopathological examination confirmed the diagnosis of schwannoma postoperatively. Presacral schwannomas are typically more accurately diagnosed using Magnetic Resonance Imaging (MRI), although Computed Tomography (CT) scans can also be helpful in the diagnostic process. Surgical treatment requires different approaches depending on the tumor's location, and the surgery can be challenging due to the tumor's anatomical position.
Keywords: Presakral tumor, schwannom, colon cancer, lymph node metastasis

Özet: Presakral schwannomalar nadir görülen, genellikle asemptomatik, iyi huylu tümörlerdir. Bu olgu sunumunda, 57 yaşında erkek bir hasta kolon kanseri nedeniyle ameliyat edildikten sonra takiplerinde, presakral alanda schwannoma tespit edildi. Lezyona başlangıçta lenf nodu metastazı olarak değerlendirildi ancak cerrahi sonrası patoloji sonucu ile schwannoma tanısı konuldu. Presakral schwannomalar, genellikle Manyetik Rezonans Görüntüleme (MRG) ile daha net tanı alır, ancak tanı da BT (Bilgisayrarlı Tomografi) taramaları da kullanılır. Cerrahi tedavi, tümörün konumuna göre farklı yaklaşımlar gerektirir ve tümörün konumuna göre cerrahisi zorlu olabilir.
Anahtar Kelimeler: Presakral tümör, schwannoma, kolon kanseri, lenf nodu metastazı

Informed Consent: It was declared that the patient signed an informed consent form.

Copyright Transfer Form: Copyright Transfer Form was signed by all authors.

Author Contribution Rates: Surgical and Medical Applications: MU, YSA, OU. Concept: OU. Design: OU. Data Collection or Processing: OU. Analysis or Interpretation: YSA, OU, MK. Literature Review: GA. Writing: OU.

Conflict of Interest Disclosure: There is no conflict of interest among the authors.

Sources of Funding: There is no funding/sponsorship for this study.

Received 02.02.2025
Accepted : 19.03.2025
Published : 21.03.2025

How to cite/ Atıf için: Ulfanov O , Angin YS, Alagaş G, Ulaş M, Schwannoma Masqueradıng As A Pathologıc Lymph Node In A Patıent Wıth Colon Adenocarcınoma: A Case Report, Osmangazi Journal of Medicine,2025;47(4):643-647

1. Introduction

Schwannomas are benign tumors that predominantly develop from Schwann cells. They are commonly found in the head and neck region (1). Primary sacral and presacral (PS) lesions are extremely rare, with an incidence of benign lesions estimated at 0.01 cases per 100,000 people in the general population (2). PS schwannomas account for only 0.3–3.2% of all schwannomas and 0.4–15% of all retrorectal tumors (3). They may develop sporadically or be associated with an inherited form of neurofibromatosis type 2 (4). These tumors typically remain asymptomatic until they reach a significant size that leads to clinical symptoms. As a result, they are often discovered incidentally and can present with various nonspecific symptoms (5). The symptoms vary depending on the affected area and usually arise due to compression of adjacent organs by the mass (6). Presacral schwannomas may cause local pain, weakness, constipation, sensory disturbances in bowel and bladder innervation, or sexual dysfunction. These tumors can remain asymptomatic for long periods, and patients often present in the fourth or fifth decade of life with large lesions that cause neurological symptoms (4).

2. Case Report

A 57-year-old male patient, with no known history of chronic disease, underwent emergency surgery due to an obstructing mass in the sigmoid colon. An anterior resection and Hartmann's ostomy procedure were performed. During the same procedure, a biopsy was taken from a 7.5 cm lesion in segment 3 of the liver, which was initially considered to be a metastasis. The pathology report of the colon revealed a moderately differentiated adenocarcinoma (T3N0), while the liver biopsy was interpreted as colorectal metastatic adenocarcinoma infiltration. After the surgery, the patient received three cycles of adjuvant chemotherapy with the FOLFOX regimen. Six months after the initial surgery, the patient underwent a left hepatectomy. Subsequently, a Hartmann's ostomy closure was planned.

Before the ostomy closure procedure, a complete blood count and routine biochemical tests were performed. Colonoscopy was conducted through the anal canal and ostomy, and thoracic, abdominal, and pelvic CT scans were obtained. The patient's blood test results and colonoscopy findings were normal. However, the CT scan revealed a 3 cm mass-like lesion in the presacral region, adjacent to the left mid-iliac fossa, which was initially considered to be a pathological lymph node related to colon cancer.

During the planned surgery, the patient underwent a diagnostic laparotomy, and the rectal stump was accessed. To excise the lesion initially suspected to be lymph node metastasis on preoperative CT, the left iliac vein was retracted, and the lesion behind the vein was excised. Subsequently, as planned, the Hartmann's ostomy was closed, and an anastomosis was performed using a 31 mm circular stapler.

Histopathological examination of the surgical specimen revealed no tumor involvement at the proximal and distal surgical margins. The excised presacral lesion, measuring 3.8 × 2.7 × 2.5 cm, had a smooth capsule, a gray-white and partly gray-brown cut surface with focal hemorrhagic areas, and signs of focal degeneration. These findings were consistent with a schwannoma.

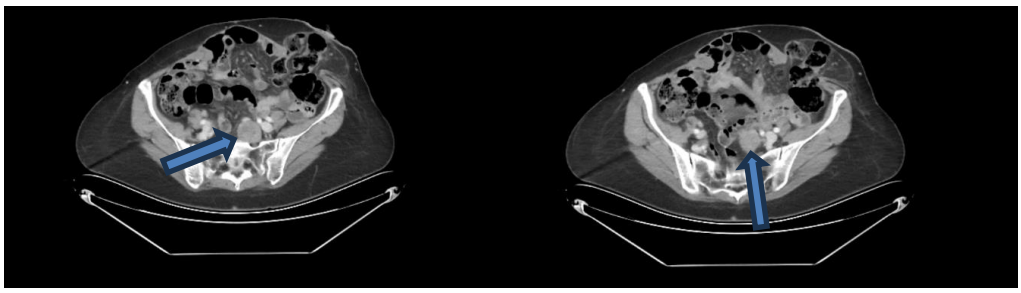

Image 1. CT Scan of the Patient

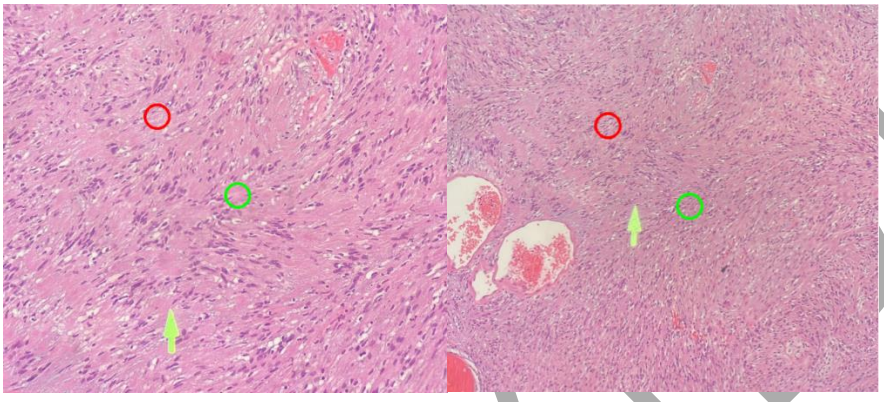

Image 2. Microscopic image of schwannoma. Antoni A region (red) and Antoni B region (green) are marked."

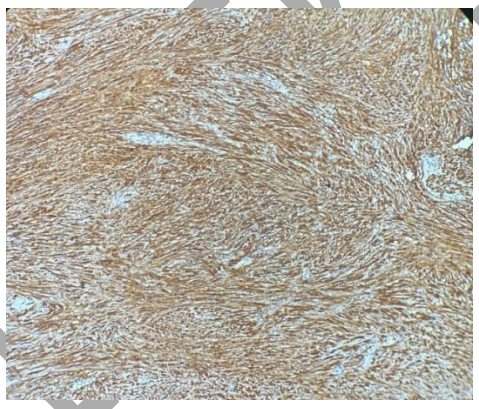

İmage 3. Immunohistochemical image of schwannoma. Tumor cells exhibit widespread and strong positivity with S100 immunohistochemical staining, supporting their Schwann cell origin.

3. Discussion

Presacral schwannomas are rare tumors that are typically diagnosed at a late stage due to their slow growth and benign nature (2). Schwannoma is a benign and slow-growing tumor that originates from the peripheral nerve sheath. Since it arises from Schwann cells, it exhibits S100 protein positivity and demonstrates an expansile growth pattern along the nerve. Histopathologically, it consists of Antoni A (densely cellular areas) and Antoni B (loosely arranged, myxoid areas) regions (7).

Magnetic Resonance Imaging (MRI) is the most valuable imaging modality for diagnosing these tumors (8). Computed Tomography (CT) imaging provides a comprehensive assessment of sacral bone structure, whereas MRI is superior for evaluating soft tissue due to its multiplanar capabilities (9). On CT scans, schwannomas typically appear as well-circumscribed, low or mixed attenuation masses and may exhibit cystic or necrotic changes in their central regions (10).

Due to their highly variable radiologic and pathologic characteristics and their development within the same anatomic space as other benign or malignant tumors, schwannomas are often misdiagnosed preoperatively as gynecological lesions, dermoid cysts, epidermoid cysts, teratomas, hamartomas, chordomas, neurofibromas, or ependymomas (11).

Regarding differential diagnosis, epidermoid and dermoid cysts, unlike schwannomas, are cystic and contain fat, appearing hyperintense on MRI (12). Chordomas are aggressive tumors that can cause bone destruction, presenting as lytic lesions on CT (13). Neurofibromas differ from schwannomas by exhibiting irregular cell distribution and can be CD34-positive (14). Teratomas contain multiple tissue components and exhibit heterogeneous signal intensity on MRI. Ependymomas display perivascular pseudorosettes, whereas schwannomas originate from the nerve sheath, showing GFAP negativity but S100 positivity (15).

In our case, due to the patient's history of operated colon cancer, the lesion was initially suspected to be a pathologic lymph node; however, such a case has not been previously reported in the literature. Metastatic lymph nodes typically appear as irregularly bordered, heterogeneous lesions with necrosis and increased metabolic activity on imaging, often demonstrating the potential for invasion into adjacent tissues (16).

The cystic form of presacral schwannomas is rare, as they are generally solid tumors (8). Klimo classified schwannomas based on their location into three groups: completely sacral/intracanalicular (Type I), completely presacral (Type III), and mixed intracanalicular/presacral (Type II) (17). The primary treatment for pelvic neurogenic tumors is surgical resection, and the extent of resection depends on the nature of the tumor and its involvement of adjacent structures. Due to their anatomical location and proximity to critical pelvic structures, these tumors pose significant challenges for surgeons (18).

Three surgical approaches have been described for presacral tumor resection: anterior (open or laparoscopic), posterior, or a combined anterior-posterior approach (20). For Klimo Type III lesions, an anterior approach is recommended, while for Klimo Type I lesions, a posterior approach is preferred. For Klimo Type II lesions, a staged anterior-posterior procedure is advised (18).

4. Conclusion

Presacral schwannomas are extremely rare, usually benign tumors. Since they are often asymptomatic, they are frequently diagnosed incidentally. Their nonspecific imaging characteristics can complicate the diagnostic process. When symptoms do occur, the tumors have typically reached a significant size, leading to compression-related symptoms in adjacent tissues and organs. In our case, the tumor was detected during imaging performed for colon cancer follow-up and was initially misinterpreted as a pathological lymph node. Due to their anatomical location, these tumors are often in close proximity to vascular structures, nerves, and organs, making surgical management more challenging.

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