ONCOLOGÍA roe-solca.ec CLINICAL CASE

Giant schwannoma of the pelvis: A case report.

***Corresponding Author:**
Hector Montes Lainez.
E-mail: Hector_montes93@hotmail.com
Telephone : 0989732362
Guayaquil, Ecuador

Conflict of interest: The authors declare no conflict of interest.

Received: May 11, 2023.
Accepted: July 26, 2023.
Published: August 25, 2023.
Editor: Dr. Lorena Sandoya.

Cite:
Panchana G, Montes H, Vega P. Giant Schwannoma of the Pelvis: Case Report. Oncology Journal (Ecuador) 2023;33(2):195-201.

ISSN: 2661-6653

DOI: https://doi.org/10.33821/713
SOCIEDAD DE LUCHA CONTRA EL CÁNCER.

Guido Panchana Egüez [1], **Hector Montes Lainez*** [1], **Kevin Albuja** [1], **Pamela Vega Ch.** [2]

1. Surgery Service, SOLCA – Guayaquil, Ecuador
2. Master's Program in Research in Health Sciences, University of La Rioja, España.

Abstract

Introduction: Schwannomas are tumors derived from Schwann cells that can occur anywhere in the body economy, and their location is unusual in the pelvis (1 to 3%). With torpid presentation and varied symptoms about the site they occupy. Its treatment is based on surgical resection.

Clinical case: We present the case of a 21-year-old man with pelvic pain for four months.

Diagnostic workshop: Images show a mass that occupies the entire pelvis; this is removed and revealed as a histopathological diagnosis. Mesenchymal neoplasm compatible with schwannoma.

Conclusion: These tumors are rare, and the pelvic location is very infrequent; their removal becomes curative and must be performed promptly.

Keywords:
MeSH: Neurilemmoma, Surgical Oncology, Schwannoma, Neurilemma, Schwann Cells.

DOI: 10.33821/713

Introduction

Schwannomas, also called neurilemomas, are tumors that originate from Schwann cells. It can occur throughout the body, but one of its less frequent locations is in the pelvic cavity (1 to 3%) [1]. Generally, they are single tumors of variable size, yellowish in color, and occur more frequently in women between 20 and 50 years of age [2]. Its symptomatology is very unclear and generally occurs when the tumor is large and compresses neighboring organs [3]. The conventional retroperitoneal and pelvic schwannoma treatment is exploratory laparotomy with tumor resection with free margins [4]. No case of this infrequent benign tumor is reported in the national medical literature, so we consider its scientific dissemination pertinent.

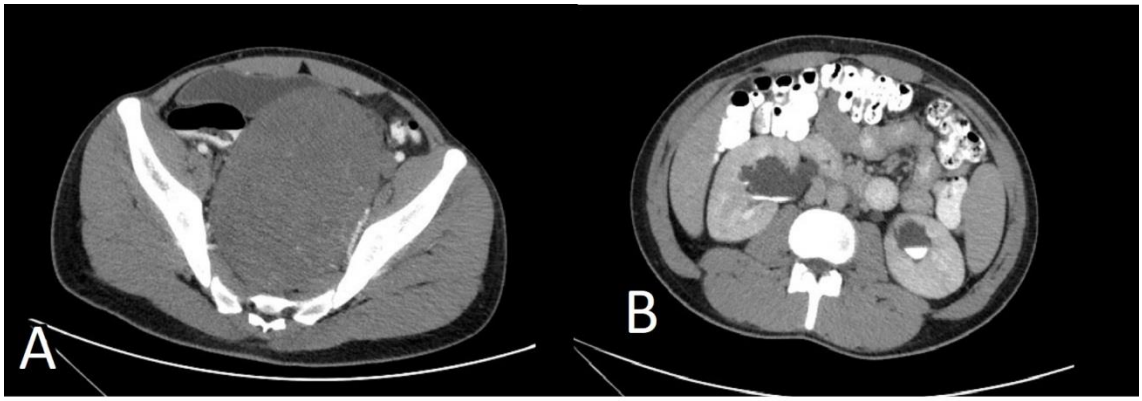
Clinical case

This is a 21-year-old male patient with no significant pathological history, low-medium socioeconomic status, or family history. He came due to intense pain in the pelvic region after several months of evolution, accompanied by a palpable mass that grew over these months.

Diagnostic workshop

A CT (Computed Tomography) scan revealed a 13 x 14 cm tumor mass occupying the entire pelvic cavity, compressing adjacent structures and generating bilateral uretero-hydronephrosis (Figure 1).

Figure 1. Simple and contrasted tomography of the abdomen and pelvis.



Giant pelvic tumors displace adjacent structures. B. Obstructive bilateral hydronephrosis due to pelvic tumor.

Based on this image, it was decided to undergo surgery where an exploratory laparotomy was performed, finding a giant tumor in the pelvis attached to the rectum and bladder (Figure 2). Immunohistochemical tests confirming the diagnosis of schwannoma (betacatein: negative; SOX10: positive; caldesmon: negative; BCL 2: positive; SMA: negative; S100: positive; CD117: negative; CD34: negative) Ki67%: 7% with mitosis from 0/10 fields of 40x.

Figure 2. Gross anatomy of the tumor.

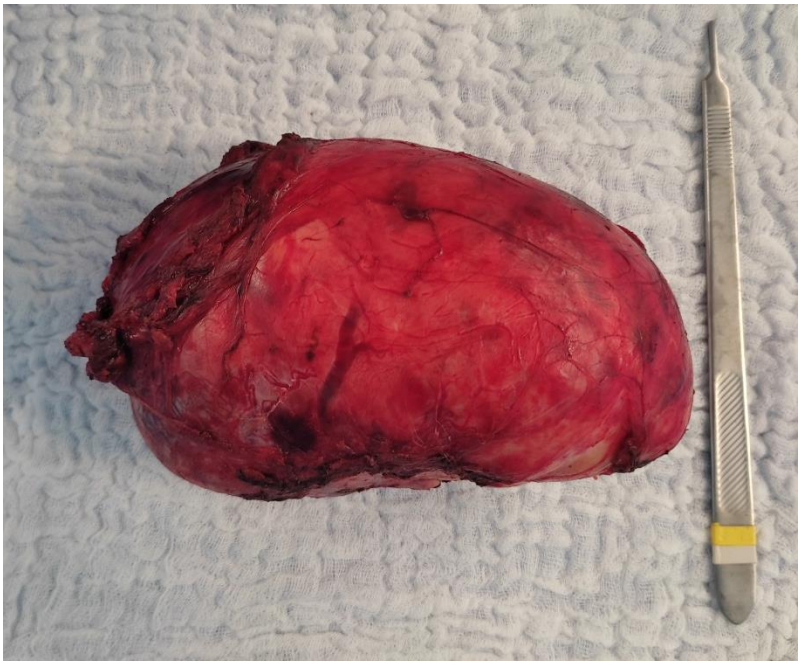


Illustration 1Tumor of 17 x 10 cm in the pelvis. Surgical excision product.

He evolved without complications in his postoperative period and was discharged eight days after his surgery, which was very well tolerated by the patient.
Given his pathology report with no evidence of malignancy, he remains under oncological surveillance six months after his surgery with no evidence of tumor recurrence.

Discussion

Schwannomas, also called neurilemmomas, originate from Schwann cells. They are located in regions such as the head, neck, oral cavity, and cranial nerves, except the olfactory nerves, mediastinum, and, to a lesser extent, the pelvic area (1-3%) from the sacral and hypogastric plexus; these can be benign or malignant [3, 4]. Benign schwannomas can recur, sometimes early, after being completely removed, having clinical and histological characteristics different from those of the original lesion. Tumor growth is not progressive; it can stop or slow down for a long time [5].

Macroscopically, they are round and delimited by a fibrous capsule, although they may present yellowish discoloration. Microscopically, they may be made up of spindle cells with wavy nuclei and pale cytoplasm and may present two types: dense/hypercellular (A) or hypocellular (B). In type A, the cells are spindle-shaped and arranged to form Verocay bodies, and the nuclei are enlarged and may present slight pleomorphism. The definitive diagnosis is made by histopathology and immunohistochemistry, which demonstrates the presence of the S1006 protein [6].

Pelvic schwannomas (PSs) are rare, single, large, well-differentiated tumors that may be confined to retroperitoneal or presacral areas presenting with calcifications (mottled, curvilinear stippled), cystic degeneration, or hemorrhages [7, 8]. They occur more frequently in women than in men. Generally, between 20 and 50 years of age, they are challenging to diagnose because they are clinically silent and typically occur when the tumor is large and compresses adjacent organs. Thus, nonspecific symptomatology is produced [9]. PSs are small tumors (5-6 cm), although large tumors (100 cm) have been reported. Sacral PSs are classified into three

types: type I tumors are limited to the sacrum; type II tumors originate in the sacrum, although they can extend to the presacral or subcutaneous space; and type III tumors are located in the retroperitoneum or pelvis [10]. The main symptom of PS is pelvic pain that may or may not radiate to the genitals or lower limbs, although the symptoms may be nonspecific [11]. Imaging methods can identify pelvic schwannomas; the diagnostic process is magnetic resonance imaging, allowing the identification of a well-defined heterogeneous mass with the enhancement of solid parts. The role of fine needle aspiration biopsy is controversial since it does not provide reliable results. The conventional treatment of retroperitoneal and pelvic schwannomas is exploratory laparotomy, although this procedure offers slower recovery and hospital stay results. Laparoscopic surgery provides less hospital time, faster postoperative recovery, better cosmetic results, and less use of analgesia. The robotic approach also offers better results than laparoscopy [12].

For benign schwannomas, surgical resection with free margins accompanied by preservation of nerve structures is the treatment of choice; however, for malignant tumors, surgical excess is extensive where they include adjacent structures, so resection with surgical margins is recommended to avoid possible recurrences [13]. The most common complication of the radical surgical procedure is postoperative neurological deficits in up to 80% of cases. The prognosis is good for benign schwannomas; for malignant schwannomas, the poor prognosis rate is high due to higher recurrence (40-100%) and lower survival (50-70%) [14].

This case behaved like a classic one of the few described; imaging tests and histopathological confirmation confirmed the diagnosis, and complete exeresis became the reasonable treatment in this type of patient.

Patient perspective

The patient was open to the proposed surgical therapy, and when he evolved favorably after his surgery, he showed satisfaction with the established treatment.

Conclusions

This medical report presents the case of a young patient with a rare pelvic schwannoma, a tumor originating from Schwann cells. Although rare (1-3% of cases), these tumors can appear in various areas of the body, such as the pelvic cavity in this case. They usually cause vague symptoms such as intense pelvic pain and palpable masses due to the compression of nearby structures. The diagnosis was based on a CT scan that showed a large mass in the pelvic cavity, obstructing the ureters and causing bilateral hydronephrosis. A successful surgical resection was performed by exploratory laparotomy to remove the schwannoma. Histopathological and immunohistochemical analysis guaranteed the diagnosis, showing characteristic Schwann cell proteins. Although benign schwannomas have a good prognosis after surgical resection, there may be occasional recurrences. In this case, complete excision led to successful recovery, with no recurrence at the six-month follow-up. The case highlights the importance of considering pelvic schwannomas when demonstrating pelvic masses, especially in young patients with nonspecific symptoms. Early and proper detection is essential for recovery and prevention of long-term complications.

Abbreviations

PSs: Pelvic schwannomas.
CT: Computed Tomography

Administrative information

Additional Files

None declared by the authors.

Acknowledgments

Not applicable.

Author contributions

Guido Panchana Eguez: Conceptualization, formal analysis, research, project administration, writing of the original draft.

Héctor Montes Lainez: Conceptualization, formal analysis, research, project administration, writing of the original draft.

Kevin Albuja: Conceptualization, methodology, validation, visualization, writing-review and editing.

Pamela Vega Ch. : Conceptualization, methodology, validation, visualization, writing-review, and edition.

Both authors read and approved the final version of the manuscript.

Financing

None.

Availability of data and materials

Data are available upon request to the corresponding author. No other materials are reported.

Statements

Ethics committee approval

Not required for clinical cases.

Consent for publication

The patient gave written consent for the publication of this clinical case.

Conflicts of interest

The authors declare that they have no conflicts of competence or interest.

References

1. Pak H, Haji Maghsoudi L. Pelvic Schwannoma: In light of a case report. Clin Case Rep. 2019 Nov 13;7(12):2488-2490. doi: 10.1002/ccr3.2542. PMID: 31893085; PMCID: PMC6935657.

2. Senoglu M, Bulbuloglu E, Demirpolat G, Altun I, Ciralik H. The anterior extraperitoneal approach to the rare presacral/retroperitoneal schwannoma. Bratisl Lek Listy. 2010;111(10):558-61. PMID: 21125802.

3. Kalagi D, Bakir M, Alfarra M, Aborayya A, Anwar I. Two Unusual Presentations of Presacral Schwannoma; A Case Series. Int J Surg Case Rep. 2019;61:165-168. doi: 10.1016/j.ijscr.2019.07.042. Epub 2019 Jul 22. PMID: 31374466; PMCID: PMC6675969.

4. Santos AJ, Duarte L, Santos SC, Casimiro C. A 68-Year-Old Woman Presenting with Recurrent Abdominal Pain and a Diagnosis of a Presacral Retroperitoneal Benign Schwannoma that Mimicked an Ovarian Tumor on Pelvic Magnetic Resonance Imaging. Am J Case Rep. 2022 Jul 20;23:e935985. doi: 10.12659/AJCR.935985. PMID: 35854634; PMCID: PMC9309983.

5. Korkontzelos I, Tsimoyiannis E, Zagaliki A, Demou A, Karabina E, Antoniou N. Pelvic retroperitoneal schwannoma presenting as a gynecologic mass: case report. Eur J Gynecol Oncol. 2005;26(1):117-9. PMID: 15755018.

6. Schüppler U, Weisner D, Schollmeyer T, Lüttges J, Kovaćs G. Imitation eines Ovarialmalignoms durch ein malignes Schwannom [Imitation of ovarian malignant tumor by malignant schwannoma]. Geburtshilfe Frauenheilkd. 1995 Feb;55(2):110-2. German. doi: 10.1055/s-2007-1022784. PMID: 7758892.

7. Dau MHT, Tran MTT, Nguyen HQ, Vo KYT, Nguyen TTT, Hoang TH, Hoang VT, Hoang DT. Pelvic schwannoma in an adult male. Acta Radiol Open. 2022 May 12;11(5):20584601221102822. doi: 10.1177/20584601221102822. PMID: 35592689; PMCID: PMC9112306.

8. Andrej O, Lucija V, Mirko O. Giant pelvic schwannoma presenting with increased urinary frequency - Case report. Int J Surg Case Rep. 2022 Apr;93:106934. doi: 10.1016/j.ijscr.2022.106934. Epub 2022 Mar 10. PMID: 35286978; PMCID: PMC8921305.

9. Jaworski E. Nerwiak osłonkowy pozaotrzewnowy miednicy małej naśladujacy miedzywiezadłowy guz jajnika [Retroperitoneal neurinoma of the small pelvis simulating an interligamental ovarian tumor]. Wiad Lek. 1969 Nov;22(21):2011-3. Polish. PMID: 5358857.

10. Xu H, Sha N, Li HW, Bai M, Chen X, Hu HL, Wu CL. A giant pelvic malignant schwannoma: a case report and literature review. Int J Clin Exp Pathol. 2015 Nov 1;8(11):15363-8. PMID: 26823895; PMCID: PMC4713681.

11. Maneschg C, Rogatsch H, Bartsch G, Stenzl A. Treatment of giant ancient pelvic schwannoma. Tech Urol. 2001 Dec;7(4):296-8. PMID: 11763493.

12. Deboudt C, Labat JJ, Riant T, Bouchot O, Robert R, Rigaud J. Pelvic schwannoma: robotic laparoscopic resection. Neurosurgery. 2013 Mar;72(1 Suppl Operative):2-5; discussion 5. doi: 10.1227/NEU.0b013e31826e2d00. PMID: 22902343.

13. Hidaka E, Ishiyama Y, Maeda C, Nakahara K, Shimada S, Mukai S, Sawada N, Ishida F, Kudo SE. Laparoscopic Extirpation of a Schwannoma in the Lateral Pelvic Space. Case Rep Surg. 2016;2016:1351282. doi: 10.1155/2016/1351282. Epub 2016 Nov 9. PMID: 27900226; PMCID: PMC5120176.

14. Trimech W, Ennaceur F, Hassine HB, Zneti H, Noomen F, Zouari K. Retrorectal Schwannomas: Atypical Presentation and Controversial Surgical Management. Case Rep Surg. 2021 May 7;2021:5535283. doi: 10.1155/2021/5535283. PMID: 34040815; PMCID: PMC8121578.

Editor's Note

The Revista Oncología (Ecuador) remains neutral regarding jurisdictional claims in published maps and institutional affiliations.