

Extrauterine Pelvic Leiomyomatosis: A Case Report

Samuel Bamogo^{1*}, Firas Ibrahim¹, Moussa Sylla¹, Bogdan Stan-Iuga¹, Razvan Mihai Aprodu¹, Eric Pappalardo¹, Anis Husset¹

¹Department of Digestive Surgery, Victor Jousselin Hospital, Dreux, France

DOI: <https://doi.org/10.36347/sjmcr.2026.v14i10.020>

| Received: 02.08.2026 | Accepted: 25.09.2026 | Published: 08.10.2026

*Corresponding author: Samuel Bamogo

Department of Digestive Surgery, Victor Jousselin Hospital, Dreux, France

Abstract

Case Report

Background: Extra-uterine leiomyomatosis is a rare benign condition characterized by the proliferation of smooth muscle cells outside the uterus. Its clinical presentation is often misleading and may mimic malignant pelvic disease, particularly in patients with a history of uterine surgery. **Case presentation:** We report the case of a 59-year-old woman with a history of total hysterectomy performed 15 years earlier for uterine fibroids. She presented with chronic pelvic pain, constipation, and urinary symptoms. Imaging revealed a large, multinodular pelvic mass causing significant mass effect on adjacent organs. Laparoscopic exploration identified multiple disseminated leiomyomatous nodules within the pelvis. Complete surgical excision with bilateral adnexectomy was performed. Histopathological examination confirmed benign smooth muscle proliferation with no atypia, necrosis, or mitotic activity, and a low Ki-67 index. **Conclusion:** Extra-uterine leiomyomatosis should be considered in the differential diagnosis of pelvic masses in patients with a history of uterine surgery. Long-term follow-up is essential due to the risk of recurrence and the rare possibility of malignant transformation.

Keywords: Parasitic leiomyoma, Laparoscopic hysterectomy, peritoneal dissemination, pelvic mass.

Copyright © 2026 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

Uterine leiomyomas are the most common benign pelvic tumors in women, affecting approximately 20% to 30% of patients over the age of 35 [1]. While they are typically located within the myometrium, the development of leiomyomas in extrauterine locations represents a rare and often diagnostically challenging entity [2].

Among these atypical presentations, so-called "parasitic" leiomyomas and pelvic leiomyomatosis are characterized by extrauterine growth and the acquisition of an autonomous neovascular supply from adjacent structures (e.g., omentum, peritoneum, and gastrointestinal tract) [2,3]. The emergence of such tumors several years after gynecological surgery, notably hysterectomy or myomectomy, is exceptionally rare but now well-documented, with an estimated incidence ranging from 0.12% to 1.25% [4,5]. This condition poses a substantial diagnostic challenge due to its frequently insidious onset and non-specific symptomatology [6].

Herein, we report a case of multisite extrauterine pelvic leiomyomatosis diagnosed 15 years

after a laparoscopic hysterectomy, and we discuss its specific diagnostic and therapeutic considerations.

CASE PRESENTATION

A 59-year-old female patient with a history of Sjögren's syndrome presented with a surgical history of a laparoscopic total hysterectomy with ovarian conservation, performed 15 years prior for a symptomatic polymyomatous uterus.

The clinical course began in 2022 with the onset of chronic pelvic pain and constipation, prompting an abdominopelvic computed tomography (CT) scan. The imaging revealed a polylobulated pelvic mass measuring $11.7 \times 9.5 \times 11.0$ cm, suggestive of extrauterine leiomyomatosis (Figure 1). Initial conservative management with active surveillance was elected.

In 2025, the patient's symptomatology worsened, characterized by the onset of lower urinary tract symptoms, including dysuria and recurrent urinary tract infections. Pelvic magnetic resonance imaging (MRI) demonstrated a conglomerate of well-circumscribed, T2-hypointense soft-tissue nodules measuring $12.0 \times 9.5 \times 12.0$ cm. The mass exerted a

Citation: Bamogo, S., Ibrahim, F., Sylla, M., Stan-Iuga, B., Aprodu, R. M., Pappalardo, E., & Husset, A. (2026). Extrauterine Pelvic Leiomyomatosis: A Case Report. *Sch J Med Case Rep*, 14(10), 2206-2209. <https://doi.org/10.36347/sjmcr.2026.v14i10.020>

significant anterior mass effect on the bladder and posterior encasement of the rectum, with no radiological evidence of frank invasion (Figure 2). These imaging characteristics were highly suggestive of a benign etiology.

Laparoscopic surgical exploration was subsequently performed. Intraoperative findings revealed nine disseminated myomatous masses within the pelvic cavity, causing bilateral compression and deviation of the sigmoid colon. Complete surgical

excision was achieved, accompanied by a bilateral adnexectomy (Figure 3). The postoperative course was unremarkable.

Histopathological examination confirmed a proliferation of well-differentiated smooth muscle cells, devoid of cellular atypia or tumor necrosis, with a Ki-67 proliferation index of less than 1%. Immunohistochemical staining demonstrated strong positivity for desmin and caldesmon, confirming the benign smooth muscle origin of the tumor.

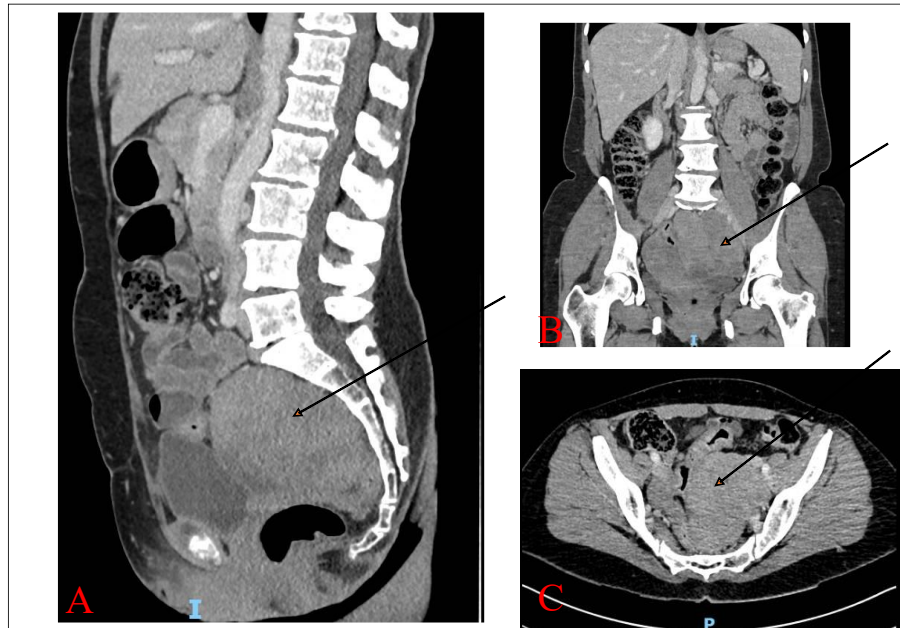


Figure 1: Preoperative abdominopelvic computed tomography (CT) scan. The images demonstrate a large, polylobulated pelvic mass occupying the pelvic cavity (A: sagittal view; B and C: axial views)

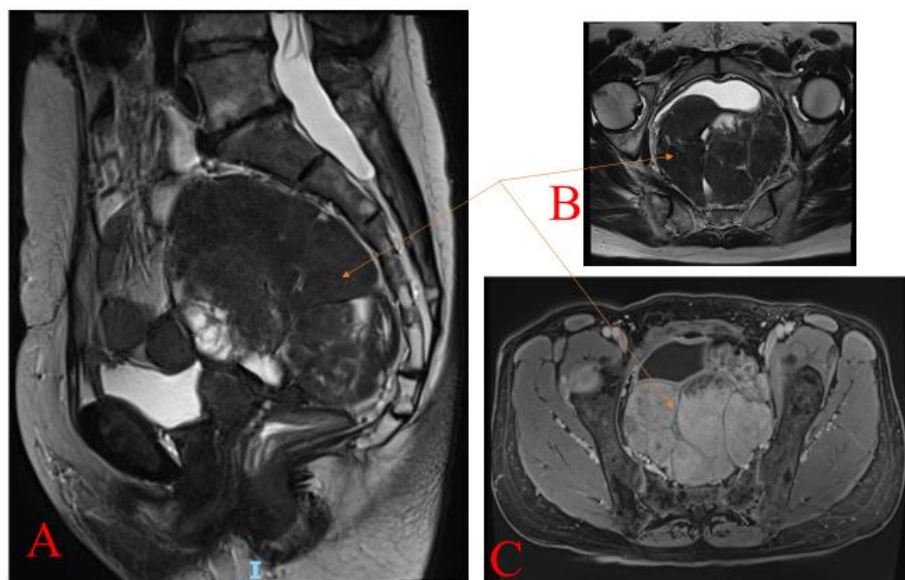


Figure 2: Pelvic magnetic resonance imaging (MRI) revealing a multisite extrauterine leiomyomatosis. A well-circumscribed conglomerate of T2-hypointense solid nodules is visualized, exerting a significant mass effect on adjacent pelvic structures (A: sagittal T2-weighted image; B and C: axial T2-weighted images)



Figure 3: Macroscopic appearance of the resected surgical specimen. The image displays the complete surgical extirpation, comprising nine distinct solid leiomyomatous tumors alongside the bilateral adnexa

DISCUSSION

Extrauterine leiomyomatosis encompasses a rare clinical spectrum of smooth muscle proliferations, including parasitic leiomyomas, disseminated peritoneal leiomyomatosis (DPL), and intravenous leiomyomatosis [1,2]. Although histopathologically benign, these entities are distinguished by their pseudo-malignant biological behavior, substantial recurrence potential, and propensity to mimic malignant pelvic malignancies [3].

The etiopathogenesis of this condition remains a subject of ongoing debate. The iatrogenic theory currently prevails, suggesting that extrauterine lesions arise from the dissemination and subsequent implantation of myomatous fragments during prior uterine surgeries, particularly those involving morcellation [4]. This hypothesis is strongly supported by the observation that the vast majority of affected patients have a history of gynecological surgery [5]. Nonetheless, documented cases occurring in the absence of prior surgical intervention suggest alternative mechanisms, such as coelomic metaplasia or the influence of hormonal and genetic factors [6]. In our patient, the prolonged latency period of 15 years between the hysterectomy and the onset of lesions strongly supports an iatrogenic origin characterized by slow, progressive tumor growth.

Clinically, the presentation is frequently non-specific and predominantly driven by the mass effect exerted by the pelvic tumors (e.g., chronic pelvic pain, gastrointestinal disturbances, or lower urinary tract symptoms); alternatively, it may be discovered incidentally during routine evaluations [7]. This insidious onset accounts for the frequent delays in definitive diagnosis. In certain instances, the extensive distribution of the disease can simulate peritoneal carcinomatosis, representing a major diagnostic pitfall [3,8].

Imaging plays a pivotal role in preoperative staging and evaluation. Recent data confirm that these lesions typically present as multiple, well-circumscribed, non-invasive, and homogeneous masses characterized by T2 hypointensity and moderate contrast enhancement [5]. While these radiological features highly suggest a benign etiology, they remain insufficient to definitively exclude a malignant process [9]. Conversely, the absence of frank invasion into adjacent pelvic organs serves as a critical radiological indicator favoring benignity [5].

The differential diagnosis primarily includes leiomyosarcoma, gastrointestinal stromal tumors (GISTs), and peritoneal carcinomatosis [9,10]. Consequently, histopathological and immunohistochemical analyses remain indispensable for definitive diagnosis. The criteria for benignity rely on the absence of cytonuclear atypia, tumor necrosis, and a low mitotic count, which are routinely complemented by a low Ki-67 proliferation index [11].

Regarding therapeutic management, complete surgical resection remains the gold standard of care [1,12]. This approach concurrently establishes the definitive diagnosis and mitigates the risk of disease recurrence. However, surgical intervention can be technically challenging due to the multifocal nature of the disease and its intimate anatomical relationship with adjacent pelvic structures. Meticulous dissection is mandatory to prevent iatrogenic gastrointestinal or urological complications. In the present case, a laparoscopic approach facilitated complete tumor extirpation despite the multisite extension, thereby confirming the feasibility of minimally invasive surgery when performed by experienced surgical teams.

The hormone-dependent nature of these tumors is well-established, characterized by the high expression of estrogen and progesterone receptors [2]. Consequently, bilateral adnexectomy is strongly

recommended in postmenopausal patients or those with completed childbearing to minimize the risk of recurrence [12]. Medical therapies, specifically gonadotropin-releasing hormone (GnRH) analogs or aromatase inhibitors, may be utilized in cases of residual or unresectable disease [2]. More recently, targeted therapies, such as mechanistic target of rapamycin (mTOR) inhibitors (e.g., sirolimus), have demonstrated promising results in the management of recurrent or refractory forms [13].

Despite being classified as a benign entity, extrauterine leiomyomatosis exhibits an unpredictable biological course. Furthermore, the risk of recurrence persists even after achieved complete surgical resection, warranting strict, long-term clinical and radiological surveillance.

CONCLUSION

Extrauterine pelvic leiomyomatosis is a rare clinical entity that can manifest after a prolonged latency period following gynecological surgery. It should be included in the differential diagnosis of any progressively growing pelvic mass in patients with a history of uterine fibroids.

Definitive diagnosis relies exclusively on histopathological analysis. Management is primarily surgical and must aim for the most complete cytoreduction possible. Given the inherent risk of recurrence, long-term surveillance is imperative.

This case underscores the deceptive clinical nature of this pathology, its ability to mimic malignant neoplasms, and the critical importance of a tailored, expert surgical strategy.

Highlights

- Extra-uterine leiomyomatosis is a rare benign condition that can mimic malignant pelvic disease
- Strong association with prior uterine surgery supports an iatrogenic origin
- Imaging findings are suggestive but not sufficient for definitive diagnosis
- Complete surgical excision is the cornerstone of treatment
- Long-term follow-up is required due to recurrence risk

REFERENCES

1. Xiaoyue Xu, Naiyu Liu, Shuxi Liu, Xiaoting Fang, Hong Chen. Advances in the understanding and anagement of leiomyomatosis peritonealis disseminata: A narrative review. *Int J Gynecol Obstet*. 2025;170:1014–1023.
2. Bucuri, C.E.; Ciortea, R.;Malutan, A.M.; Oprea, V.; Toma, M.;Roman, M.P.; Ormindean, C.M.; Nati,I.; Suci, V.; Simon-Dudea, M.; et al. Disseminated Peritoneal Leiomyomatosis—A Challenging Diagnosis-Mimicking alignancy Scoping Review of the Last 14 Years. *Biomedicines* 2024, 12, 1749. <https://doi.org/10.3390/biomedicines12081749>.
3. Matthew Lee, Gabriella Morey, Hector Lopez, Robert Bass, Susana Ferra. Disseminated peritoneal leiomyomatosis mimicking carcinomatosis: A case report. *International Journal of Surgery Case Reports* 120 (2024) 109908. DOI: 10.1016/j.ijscr.2024.109908.
4. Van der Meulen JF, Pijnenborg JMA, Boomsma CM, Verberg MFG, Geomini PMAJ, Bongers MY. Parasitic myoma after laparoscopic morcellation: a systematic review of the literature. *BJOG* 2016;123:69–75.
5. He X, Ma X, Jiang N, Weng C, Yang L. Computed tomography and magnetic resonance imaging features of abdominal and pelvic leiomyomatosis peritonealis disseminata: A retrospective observational study. *J Clin Imaging Sci*. 2025;15:6. doi: 10.25259/JCIS_144_2024.
6. Byun, Jung M.; Cho, Hwa J.; Kim, Ye S.; Ku, Tae I. Leiomyomatosis peritonealis disseminata associated with large uterine myoma without history of surgery: A case report and review of literature. *Indian Journal of Cancer* 62(2):p 308-311, Apr–Jun 2025. DOI: 10.4103/ijc.ijc_843_21.
7. Gebreslase, Musie Negasi ; Reta, Birhanu Kassie; Girmay, Haftom Guesh; Zera, Million Abraha; Gebremariam, Awash Solomon. Leiomyomatosis peritonealis disseminata presenting as acute abdomen: A rare case report. *International Journal of Surgery Case Reports* 134(C):111711, September 2025. | DOI: 10.1016/j.ijscr.2025.111711.
8. Chen X, Liu H, Shi H, Fan Q, Sun D and Lang J). Leiomyomatosis Peritonealis Disseminata Following Laparoscopic Surgery With Uncontained Morcellation: 13 Cases From One Institution. *Front. Surg.* 8:788749. 2021. doi: 10.3389/fsurg.2021.788749.
9. Rha SE, Byun JY, Jung SE, et al. CT and MRI of uterine sarcomas and their mimickers. *AJR Am J Roentgenol*. 2003 ;181(5) :1369–1374.
10. Ziouziou I, Bennani H, Zouaidia F, et al. Léiomyome rétro-péritonéal : à propos d'un cas. *Progrès en Urologie*. Volume 24, Issue 5, April 2014, Pages 262-265.
11. Bell SW, Kempson RL, Hendrickson MR. Problematic uterine smooth muscle neoplasms. *Am J Surg Pathol*. 1994 ;18(6) :535–558.
12. Low HY, Zhao Y, Huang KS, et al. Intravenous leiomyomatosis of the uterus: a clinicopathological analysis of nine cases and literature review. *Taiwanese Journal of Obstetrics & Gynecology* 56 (2017) 362-365.
13. Guorui Zhang, Rong Fan, Hua Yang, Hao Su, Xin Yu, Yutong Wang, Fengzhi Feng and Lan Zhu. Safety and efficacy of sirolimus in recurrent intravenous leiomyomatosis, pulmonary benign metastatic leiomyomatosis, and leiomyomatosis peritonealis disseminata: a pilot study. *BMC Medicine* (2024) 22:119. <https://doi.org/10.1186/s12916-024-03344-9>.