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## A Case of a Retroperitoneal Leiomyoma during Total Laparoscopic Hysterectomy

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# A Case of a Retroperitoneal Leiomyoma during Total Laparoscopic Hysterectomy

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## Abstract

Retroperitoneal leiomyomas are rare clinical entities and poses clinical and therapeutic challenges to the benign gynecologist. We present the case of a 51 year-old gravida 2 para 2 with symptomatic leiomyomas undergoing definitive surgical management with total laparoscopic hysterectomy. Intraoperatively, a retroperitoneal mass in the pelvic side was identified, excised, and removed from the abdominal cavity without complications. Final pathology confirmed a leiomyoma.

## Keywords

Fibroids, parasitic myoma, robotic surgery, hysterectomy

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## Conflict of Interest Statement

No conflict of interest.

## IMAGING-VIDEO-AUDIO MEDIA

# A Case of a Retroperitoneal Leiomyoma during Total Laparoscopic Hysterectomy

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### Abstract

Retroperitoneal leiomyomas are rare clinical entities and poses clinical and therapeutic challenges to the benign gynecologist. We present the case of a 51 year-old gravida 2 para 2 with symptomatic leiomyomas undergoing definitive surgical management with total laparoscopic hysterectomy. Intraoperatively, a retroperitoneal mass in the pelvic side was identified, excised, and removed from the abdominal cavity without complications. Final pathology confirmed a leiomyoma.

**Keywords:** Fibroids, Parasitic myoma, Robotic surgery, Hysterectomy

## 1. Presentation

A 51-year-old gravida 2 para 2 was referred for surgical consultation of symptomatic 16 week-sized uterus. Past surgical history was notable for prior sleeve gastrectomy and hiatal hernia repair. Her medical history was unremarkable. Pelvic ultrasound demonstrated a multi-lobular uterus measuring 11.6 x 9.4 x 9.9 cm uterus with largest fundal myoma measuring 6.2 cm and normal bilateral adnexa. Follow up pelvic MRI confirmed similar sized uterus, however did not initially identify a retroperitoneal mass on radiology report (Fig. 1). After consultation, she elected to undergo robotic-assisted total laparoscopic hysterectomy, bilateral salpingectomy, and cystoscopy.

During the procedure, a retroperitoneal mass in then left lower pelvic side wall was visualized (Fig. 2). This mass had a cauliflower-like appearance underneath the overlying peritoneum. After completion of the hysterectomy, this mass with its vascular blood supply was carefully resected with attention to the adjacent left ureter (Fig. 3). Intraoperative cystoscopy was normal. On final

pathology, retroperitoneal mass was confirmed to be a leiomyoma.

## 2. Discussion

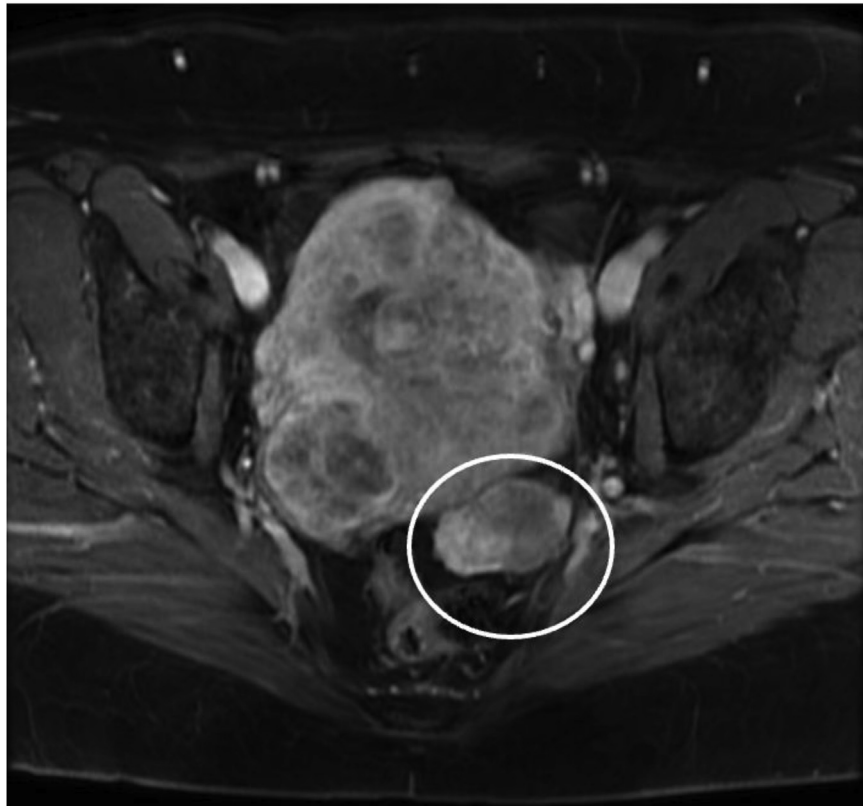
Leiomyomas are monoclonal tumors that arise from uterine smooth muscle cells. It is estimated that uterine leiomyomas will occur up to 70% of women by menopause with 25% requiring medical or surgical intervention.<sup>1</sup> Retroperitoneal leiomyomas can pose diagnostic and therapeutic challenges as most retroperitoneal tumors are malignant.<sup>2</sup> Differentiating a retroperitoneal mass on MRI can be radiologically challenging in the setting of a presumed large uterine leiomyoma and rarity of lesion. In this case, due to the bulky and enlarged nature of the uterus, it was likely presumed to had been attached. If identified preoperatively, this would prompt gynecologic oncology referral and may require further surgical cancer staging. Likewise, if unable to determine malignant potential, morcellation would be contraindicated.

The etiology is not completely understood. Traditional thought suggested that pedunculated myomas lose their uterine attachments by

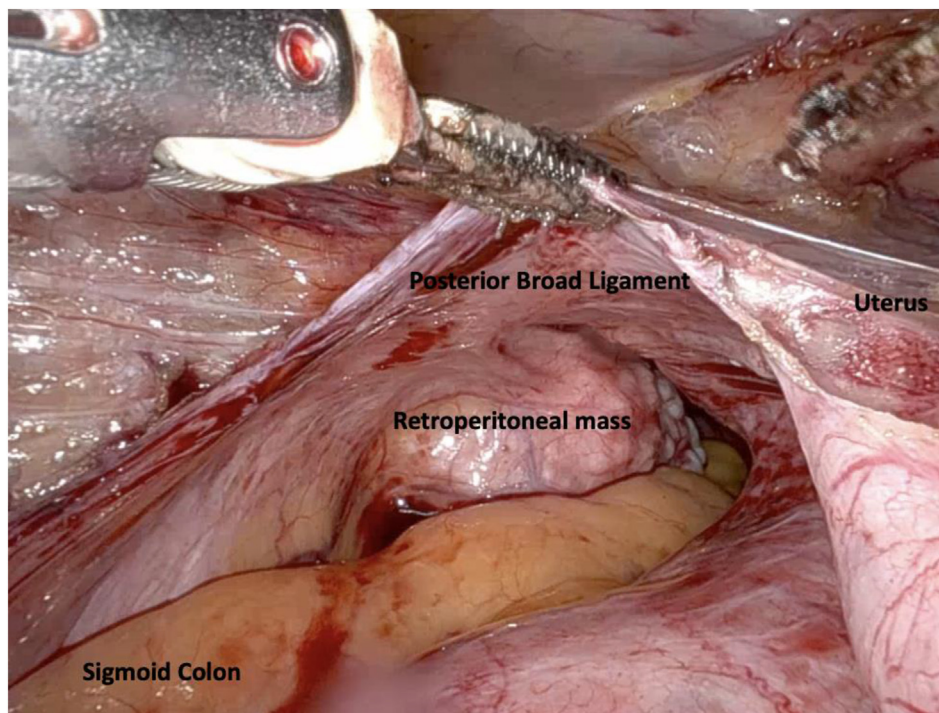
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*Fig. 1. Pelvic MRI demonstrating uterus with multiple leiomyomas. The original radiology report did not mention a retroperitoneal mass, and presumed this was connected to the bulky fibroid uterus.*



*Fig. 2. Retroperitoneal mass in the left lower pelvic side wall.*

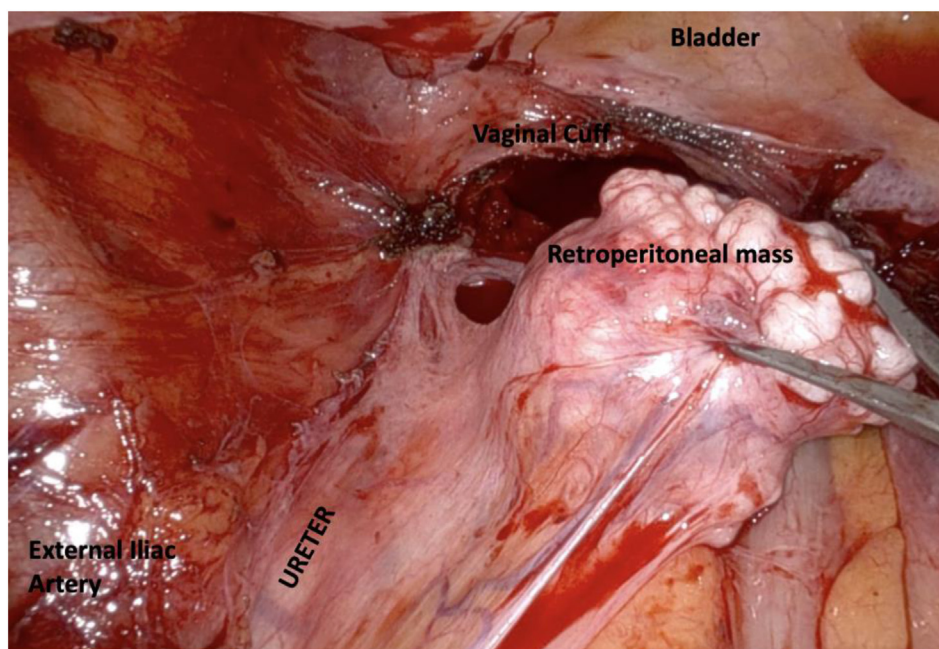


Fig. 3. Medial traction applied for the dissection the retroperitoneal mass away from the left ureter.

outgrowing their blood supply and become parasitic to surrounding organs and peritoneum.<sup>3</sup> Several other etiologies exist, including iatrogenic parasitic myomas due to prior uterine surgeries with previous use laparoscopic power morcellation, hormonally sensitive remnants of the Mullerian duct, or from retroperitoneal smooth muscle elements.<sup>3–5</sup> These spontaneous parasitic myomas are often both histologically and pathologically similar to their uterine source when benign.<sup>6</sup> Knowledge of the retroperitoneal space and identification of the ureter is essential in providing safe and excellent surgical dissection.

Retroperitoneal leiomyomas remain a rare entity and pose clinical, diagnostic, and surgical challenges.

### Ethical approval and consent to participate

Written consent was obtained. No IRB was required by our institution for case reports.

### Consent for publication

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

### Availability of supporting data

Not applicable.

### Funding

Not applicable.

### Conflicts of interest

Not applicable.

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