

# Parasitic Leiomyoma Peritoneum—A Rare Case

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## Abstract

Leiomyoma, benign tumors of smooth muscle origin, is one of the commonest uterine tumours in the reproductive age group and originates from the myometrium. While most leiomyomas are asymptomatic, they can grow and cause heavy and painful menstruation, painful sexual intercourse and urinary frequency and urgency. Extra uterine leiomyomas are rare, usually benign, they may theoretically arise from any anatomic site containing smooth muscle. Their presence in pre-peritoneal or within the anterior abdominal wall muscles is extremely uncommon and often masquerades as an adnexal mass leading to dilemmas in diagnosis.

## Keywords

Leiomyoma, Ovarian Tumour, Laparotomy, Hysterectomy

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## 1. Introduction

Uterine leiomyomas [fibroids] are one of the most common tumours found in women of the reproductive age group. It affects 20% - 30% of women older than 35 years and their incidence is on the rise as many women are postponing their reproductive careers [1].

Extra uterine leiomyomas are rare, benign, and may arise from any anatomic site. Their unusual growth pattern may even mimic malignancy and can result in clinical dilemma. Subserosal fibroids are located underneath the mucosal (peritoneal) surface of the uterus and can become very large and grow out in a papillary manner to

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become pedunculated fibroids. If a pedunculated subserosal fibroid develops an extremely long stalk, it is called wandering or migrating leiomyoma [2]. These pedunculated growths can occasionally detach from the uterus to become a parasitic leiomyoma [2] [3]. Parasitic leiomyomas have been found in the remnants of previous hysterectomy or laparoscopic myomectomy especially when a morcellator has been used for retrieval [3] [4].

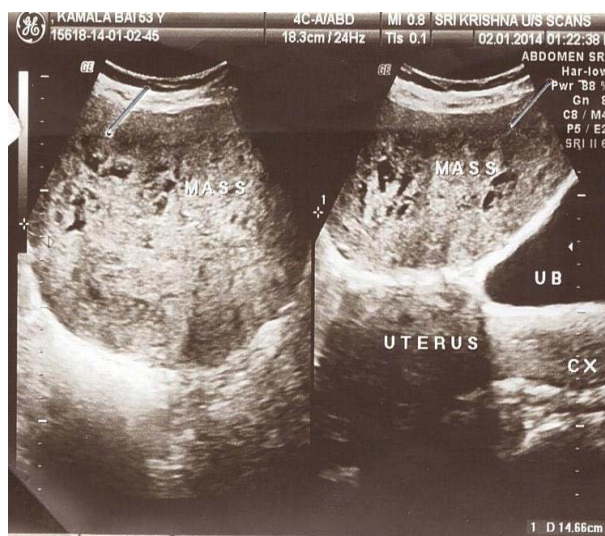
## 2. Case Report

A 52-year-old multiparous woman presented with complaints of mass per abdomen since one year and dysmenorrhea for 3 months. Abdominal examination revealed a mass of 16 - 18 weeks size, palpable more towards the left side occupying left lumbar and left iliac fossa. The mass was variable in consistency and mobile in all directions. Bi-manual examination confirmed the mass to be separate from the uterus. Ultrasound examination revealed a heterogeneous mass, 15cm in diameter in the midline, located cephalad to the uterus and urinary bladder. The uterus was found to be bulky with multiple fibroids. CT scan revealed the same heterogeneous mass consisting of solid and predominantly cystic elements situated antero-superior to the bladder. A provisional diagnosis of ovarian tumour or pedunculated subserosal fibroid was made and she was planned for laparotomy and proceed. Intra-operatively she was found to have a mass of 15 × 13 cm beneath the rectus muscle and above the parietal peritoneum extending laterally from the midline on the left side. Sharp dissection was performed and the plane of cleavage was obtained. The mass was variable in consistency, mostly cystic, and on aspiration a thick viscous oily substance was obtained. The mass was excised in toto. We proceeded to Total Abdominal Hysterectomy and she was found to have bulky uterus with multiple fibroids. Incidentally, a small right ovarian cyst of 3 × 3 cm was also noted. The anterior parietal wall mass weighed 600 grams and was thought to be a soft tissue tumour. The specimen was sent for histopathological examination and the findings were consistent with leiomyoma. On her follow-up visit, she was doing well with no recurrence of mass or pain abdomen (**Figures 1-3**).

## 3. Discussion

Uterine fibroids are the most common benign pelvic tumors in women and are present in about 80% of all hysterectomy specimens [5]. The most common sites for fibroid are uterus and gastrointestinal tract. However, they are known to originate from wherever smooth muscle cells exist [5]-[7]. Leiomyoma is known to occur in scars as old as 30 years [8]. Whether smooth muscle cells in vessels of anterior abdominal wall and peritoneum react to the extraneous hormonal stimulation to form leiomyoma is yet to be explained.

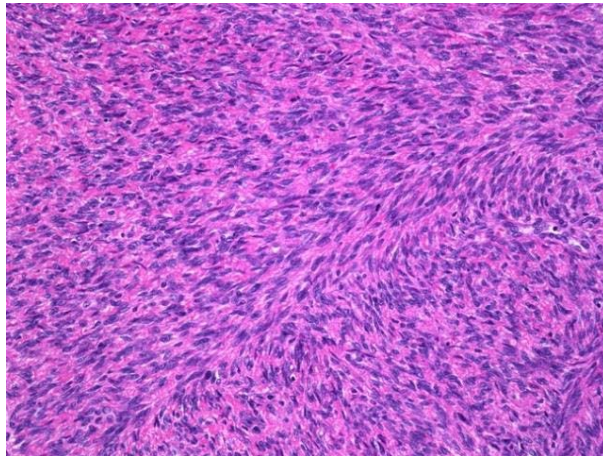
The term Parasitic Leiomyoma was first coined by Kelly and Cullen in 1909 and they could either be 1) *primary* or *spontaneous*, explained as pedunculated subserosal fibroid which develops a long stalk, outgrowing



**Figure 1.** USG image showing the relation of the uterus and the mass.



**Figure 2.** Intra-operative picture while dissecting and excising the mass.



**Figure 3.** Histopathological Examination, H&E stain: Concentrically arranged smooth muscle cells-Leiomyoma.

their uterine blood supply and subsequently receiving blood supply from other sources or 2) *secondary or iatrogenic*, seeding a portion of the fibroid during morcellation and leaving behind a small fragment that implants to the normal tissue anywhere in the peritoneum. In a study by Kho and Nezhat, twelve cases were studied and they reported 83% of patients had prior abdominal surgery and 67% patients had prior myomectomy [9].

Our patient did not have any prior surgical history and we wished to hypothesize that the leiomyoma was one of the parasitic wondering varieties. With the setting of multiple fibroids in this patient's uterus, we could also conclude that this was a parasitic fibroid rather than a *de novo* leiomyoma arising in non Mullerian smooth muscle of the peritoneal cavity or abdominal wall.

Our case reiterates the important fact that parasitic leiomyomas present with diagnostic dilemmas for even astute clinician as they often masquerade as adnexal masses.

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