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# Parasitic Leiomyoma : A Case Report of an Unusual Tumor and Literature Review

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## Abstract

Uterine leiomyomas are one of the most common tumors in women. Parasitic leiomyoma is an uncommon type of uterine leiomyoma. It may present with a wide spectrum of symptoms.

The authors report a case of a 44-year-old woman who presented with a palpable pelvic mass and increased frequency of urination for 2 years. A parasitic leiomyoma that had blood supplies from the common iliac vessels was diagnosed during the operation. Total abdominal hysterectomy and mass removal were performed without complication. Even though a parasitic leiomyoma is uncommon, it should be included in the differential diagnosis of pelvic mass. The management depends on the operative finding and the desired fertility function of the patients. Literature on parasitic leiomyoma is also reviewed.

**Key word :** Leiomyoma, Parasitic, Symptom, Pelvic Mass

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Leiomyomas are benign tumors of the smooth muscle in origin which are referred to as fibroids. Uterine leiomyomas are one of the most common tumors in women. They occur in 20-30 per cent of women who are over 30 years old. The vast majority

are asymptomatic, but it may present with a wide variety of symptoms including menorrhagia, pelvic pain, urinary frequency and tenesmus<sup>(1)</sup>. Other less frequent complaints such as gastrointestinal bleeding and deep vein thrombosis have been reported<sup>(2,3)</sup>.

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Grossly, the tumors are well circumscribed and uncapulated<sup>(4)</sup>. When such tumors become adherent to the surrounding structures, they develop an auxillary blood supply and lose the original attachment to the uterus; they are termed parasitic leiomyoma<sup>(4,5)</sup>. This is an uncommon finding. There have been fewer than twenty cases reported in the English publications. Herein, the authors report an additional case of parasitic leiomyoma that was not diagnosed before the operation and a review of the literature.

### CASE REPORT

A 44-year-old woman, para 3-0-1-3, presented with a palpable pelvic mass and increased frequency of urination for 2 years. She denied any history of weight loss and gastrointestinal symptoms. She had had three uncomplicated vaginal deliveries and had undergone Pomeroy's tubal sterilization 4 years earlier. Her menstrual periods were regular with an interval of 30 days and 4-day duration of flow. Her last menstrual period was December 8, 2001. Her past history and family history were unremarkable.

Her physical examination revealed blood pressure of 110/80 mmHg, pulse rate of 80/min, respiratory rate of 20/min, and body temperature of 36.8°C. The abdomen was distended and a palpable 18-week-size uterus. There was no adnexal or rectal mass palpated. Her laboratory investigations demonstrated Hct 40.4 per cent, white blood cell count 5,510 cells/mm<sup>3</sup> and platelets 241,000/mm<sup>3</sup>. The pelvic ultrasonogram demonstrated a normal size uterus, a 121 x 88 mm, nonhomogeneous echogenic mass contiguous with the uterine fundus, and no free fluid in the cul-de-sac. The pre-operative diagnosis was subserous leiomyoma.

At laparotomy, no ascitic fluid was seen. The leiomyomatous mass diameter of 20 cm originated from the right retroperitoneal space just above the pelvic brim, which was completely separated from any connection with the uterus (Fig. 1). Its vascular supplies derived from common iliac vessels. The uterus and ovaries appeared normal. Both fallopian tubes had interruption sites at the isthmic portion. The mass was readily shelled out and total hysterectomy was performed. Gross examination showed a 1,058-g mass measuring 14 x 10 x 10 cm. Its cut section revealed a typical whorled appearance of leiomyoma with areas of hemorrhage and fatty degeneration. Microscopy confirmed the diagnosis of leiomyoma. There was neither anaplasia nor mitotic activity. The post-opera-

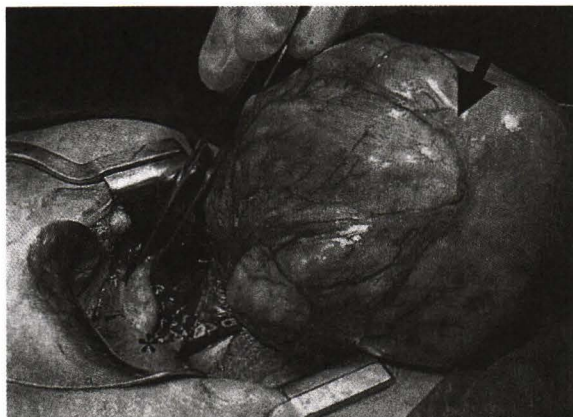


Fig. 1. The operative finding demonstrates a large parasitic leiomyoma (arrow) and normal sized uterus.

tive period was uneventful and the patient was discharged on the fourth post-operative day. She was well at the 6-week follow-up.

### DISCUSSION

This case report of a parasitic leiomyoma which had vascular supplies from the common iliac vessels, had no connection with the uterus. The proposed mechanism is the subserosal type of leiomyoma which may develop a long stalk and become adherent to its nearby structures. After losing the original attachment with the uterus, these tumors are termed parasitic leiomyomas<sup>(4,5)</sup>.

The symptoms in this present case were from pressure symptoms similar to a previous case report<sup>(6)</sup>. However, massive intraperitoneal bleeding causing abdominal distention and shock can occur<sup>(1)</sup>. This is caused by rupture of the large veins overlying the surface of the leiomyoma<sup>(1)</sup>. The massive lower gastrointestinal hemorrhage caused by parasitic uterine leiomyoma at the distal ileum<sup>(2)</sup>, acute abdomen by torsion of parasitic leiomyoma<sup>(7)</sup>, and pseudo-Meigs' syndrome<sup>(5)</sup> have also been reported. Parasitic leiomyoma can also cause unilateral ureteral obstruction when it is located in the retroperitoneum<sup>(8)</sup>.

The diagnosis of parasitic leiomyoma in this case was made during the operation, similar to other reports<sup>(5-12)</sup>. Parasitic leiomyoma may mimic a variety of adnexal lesions or uterine sarcoma because of its unusual appearances<sup>(5)</sup>. It can only be recognized if

**Table 1. Literature review : cases of parasitic leiomyoma<sup>(2,5-12)</sup>.**

Authors (year)	Age (years)	Para	Symptoms	Pre-operative diagnosis	Site	Operation	Outcome
Ranney & Frederick (1979) <sup>(9)</sup>	-	-	-	No	Attached to the sigmoid colon and left pelvic peritoneum	TAH & mass removal	Good
Zaitoon (1986) <sup>(8)</sup>	40	-	Unilateral ureteral obstruction	No	Right pelvic area, retroperitoneum	TAH & mass removal	Good
Rader et al (1990) <sup>(2)</sup>	43	4-0-0-4	Massive lower GI hemorrhage	Yes	Attached to the distal ileum	TAH & BSO & segment of distal ileum excision	Good
Lurie et al (1991) <sup>(12)</sup>	40	7-0-5-7	Lower abdominal pain, dysmenorrhea	No	Attached to the peritoneum	Mass removal	Good
Brieger et al (1995) <sup>(7)</sup>	41	1-0-0-1	Acute abdomen	No	Attached to the omentum mass removal	Laparoscopic	Good
Ghamande et al (1996) <sup>(6)</sup>	32	0-0-0-0	Abdominal pain & discomfort	No	Right pararectal space	Right SO & mass removal & appendectomy	Good
Ripps et al (1997) <sup>(11)</sup>	33	1-0-0-1	Menorrhagia, dysmenorrhea, abdominal discomfort	No	Attached to the transverse colon & omentum	Mass removal	SMV & portal vein thrombosis
Yeh et al (1999) <sup>(10)</sup>	33	0-0-0-0	Lower abdominal pain	No	Attached to the broad ligament	-	-
	34	0-0-0-0	Anorexia, constipation, increase in abdominal size	No	Attached to the left broad ligament	-	-
Kebapci et al (2002) <sup>(5)</sup>	38	-	Low back pain, abdominal distention	No	Blood supply from the omentum	Mass removal, omentectomy, and appendectomy	Good
Present case	44	3-0-0-3	Palpable pelvic mass, increase frequency of urination	No	Right pelvic brim	TAH & mass removal	Good

TAH = Total abdominal hysterectomy, SO = Salpingo-oophorectomy, BSO = Bilateral salpingo-oophorectomy, SMV = Superior mesenteric vein, GI = Gastrointestinal

it is separated from the ovary and uterus and if no connection from the uterus and has its blood supply from other organs can be demonstrated on sonography (10), and magnetic resonance imaging (MRI)(13). If it is close to the uterus and the adnexa, the mass is very large, occupying the entire pelvis, and no peduncle is visible; the diagnosis then becomes difficult(5). In this case, the diagnosis was not made before the operation because the mass was close to the uterus from the ultrasonographic findings.

The management of this present case was hysterectomy and removal of a parasitic leiomyoma as previously reported(2,8,9) due to her completed family and permanent sterilization. The management of a parasitic leiomyoma is similar to other types of leiomyoma. Conservative management is indicated for young or unmarried women who desire fertility function(14).

The authors performed a MEDLINE search of the medical literature from 1966 to 2002. Eleven cases of parasitic leiomyoma were found the present including this case and are summarized in Table 1(2,5-12). All cases occurred in the reproductive period. The symptoms varied from having mild pressure symptoms to severe symptoms such as abdominal pain, lower gastrointestinal hemorrhage and ureteral obstruction. The diagnosis was made before operation in only 1 case (9.1%). Four cases (36.4%) were managed with hysterectomy and mass removal, while five cases (45.5%) were managed with mass removal. The outcome was favorable in most cases.

In conclusion, even though parasitic leiomyoma is uncommon, it should be included in the differential diagnosis of a pelvic mass. The management depends on the operative finding and the desired fertility function of the patients.

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## REFERENCES

1. Hillard PJA. Benign diseases of the female reproductive tract: Symptoms and signs. In: Berek JS, editor. *Novak's Gynecology*. 13<sup>th</sup> ed. Philadelphia: Lippincott Williams & Wilkins; 2002: 351-420.
2. Rader JS, Binette SP, Brandt TD, Sreekanth S, Chhablani A. Ileal hemorrhage caused by a parasitic uterine leiomyoma. *Obstet Gynecol* 1990; 76: 531-4.
3. Phupong V, Tresukosol D, Taneepanichskul S, Boonkasemsanti W. Unilateral deep vein thrombosis associated with a large myoma uteri. A case report. *J Reprod Med* 2001; 46: 618-20.
4. Zaloudek C, Norris HJ. Mesenchymal tumors of the uterus. In: Kurman RJ, editor. *Blaustein's pathology of the female genital tract*. 4<sup>th</sup> ed. New York: Springer-Verlag; 1994: 487-528.
5. Kebapci M, Aslan O, Kaya T, O TY, Ozalp S. Pedunculated uterine leiomyoma associated with pseudo-Meigs' syndrome and elevated CA-125 level: CT features. *Eur Radiol* 2002; 12 (Suppl 4): S127-9.
6. Ghamande SA, Eleonu B, Hamid AM. High levels of CA-125 in a case of a parasitic leiomyoma presenting as an abdominal mass. *Gynecol Oncol* 1996; 61: 297-8.
7. Brieger GM, MacGibbon AL, Peat BP. Torsion of a parasitic fibroid. *Aust NZ J Obstet Gynaecol* 1995; 35: 224-5.
8. Zaitoon MM. Retroperitoneal parasitic leiomyoma causing unilateral ureteral obstruction. *J Urol* 1986; 135: 130-1.
9. Ranney B, Frederick I. The occasional need for myomectomy. *Obstet Gynecol* 1979; 53: 437-41.
10. Yeh HC, Kaplan M, Deligdisch L. Parasitic and pedunculated leiomyomas: Ultrasonographic features. *J Ultrasound Med* 1999; 18: 789-94.
11. Ripps BA, Nason WB, Tan TB, Mietling SW. Thrombosis, leiomyoma and GnRH-a therapy. A case report. *J Reprod Med* 1997; 42: 124-6.
12. Lurie S, Gorbacz S, Caspi B, Borenstein R. Parasitic leiomyoma: A case report. *Clin Exp Obstet Gynecol* 1991; 18: 7-8.
13. Ueda H, Togashi K, Konishi I, et al. Unusual appearances of uterine leiomyomas: MR imaging findings and their histopathologic backgrounds. *Radiographics* 1999; 19: S131-45.
14. Stovall TG. Hysterectomy. In: Berek JS, editor. *Novak's Gynecology*. 13<sup>th</sup> ed. Philadelphia: Lippincott Williams & Wilkins; 2002: 761-801.

## เนื้องอกมดลูกจากปรสิต : รายงานผู้ป่วยและการรวบรวมรายงาน

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เนื้องอกมดลูกเป็นหนึ่งในเนื้องอกที่พบบ่อยในผู้หญิง เนื้องอกมดลูกจากปรสิต เป็นเนื้องอกมดลูกที่พบได้ไม่บ่อย และสามารถแสดงอาการที่มาพบได้หลากหลาย คณะผู้รายงานได้รายงานผู้ป่วยหญิงอายุ 44 ปีที่มาด้วยการคลำพบก้อนที่ท้องน้อยและปัสสาวะบ่อยมา 2 ปี เนื้องอกมดลูกจากปรสิต สามารถให้การวินิจฉัยได้ขณะที่ทำผ่าตัด โดยที่ก้อนเนื้องอกได้รับเลือดมาเลี้ยงจากหลอดเลือด Common iliac ผู้ป่วยได้รับการผ่าตัดเอามดลูกและก้อนเนื้องอกออกทางหน้าท้องโดยไม่มีภาวะแทรกซ้อน แม้ว่าเนื้องอกมดลูกชนิด Parasite พบได้ไม่บ่อย ก็ควรอยู่ในการวินิจฉัยแยกโรคของผู้ป่วยที่มาด้วยก้อนในอุ้งเชิงกราน การตัดสินใจในดูแลรักษาขึ้นกับการตรวจพบขณะที่ทำผ่าตัดและความต้องการมีบุตรต่อไปของผู้ป่วย คณะผู้รายงานยังได้รวบรวมรายงานเกี่ยวกับเนื้องอกมดลูกจากปรสิตร่วมด้วย

**คำสำคัญ :** เนื้องอกมดลูก, ปรสิต, อาการ, ก้อนในอุ้งเชิงกราน

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