

## Case Report

# PARASITIC MYOMA: A VERY RARE CASE REPORT AND REVIEW OF LITERATURE

Md. Manir Hossain Khan<sup>1</sup>, Dr Jobaida Sultana<sup>2</sup>

### Abstract:

A 32 years old unmarried women presented with periumbilical colicky abdominal pain which shifted to the right iliac fossa with anorexia, vomiting and low grade fever. She had history of open myomectomy 4 years back for menorrhagia with multiple fibroids (myomas). On examination, the pointing sign, Rovsing's sign, McBurney's sign & Blumberg's sign were positive. Then she was diagnosed as a case of acute appendicitis. Ultrasonography revealed nothing significant. Appendectomy was done through right Grid Iron incision. Appendix was found inflamed, swollen and there was collection of fluid in the peritoneal cavity. During closure, incidentally a solid mass about 5 × 4 × 2.5 cm was found exterior to the peritoneum near the incision at the abdominal wall. The mass was excised. Subsequently histopathology confirmed a leiomyoma (Myoma or parasitic fibroid).

The parasitic myoma may develop spontaneously as pedunculated subserous myoma loose their uterine blood supply or iatrogenically from retained fragment of myoma from previous myomectomy or hysterectomy and get blood supply from abdominal wall. Even small bits displaced into the abdominal cavity can result in parasitic fibroids. This case is reported here to give emphasis on the surveillance of parasitic myoma during myomectomy or hysterectomy for fibroid uterus and all tissue pieces that are morcellated should be diligently removed for the prevention of further development of parasitic myoma.

### Introduction:

Parasitic myoma is rare but have been reported in literature. These could be myomas detached from the uterus,<sup>1</sup> which have taken blood supply from adjacent organs that have out grown their blood supply and become separated from the uterus, receiving blood supply from another source. More recently second theory has evolved which suggests iatrogenic parasitic myomas may developed from retained myoma fragments following myomectomy.<sup>2-4</sup> Laparoscopic retrieval of specimen by morcellation aids in the removal of large specimens but incurs the risk of incomplete removal. These retained fragments can

get dislodged in the peritoneal cavity and take blood supply from adjacent structures and grow.<sup>4-6</sup> Some of them can cause symptoms, grow to any size and present as mass anywhere in the peritoneal cavity.<sup>4,7</sup>

### Case report:

A 32 years old unmarried, with no co-morbidities nonhypertensive and nondiabetic women presented with periumbilical colicky abdominal pain which shifted to the right iliac fossa with anorexia, nausea, vomiting and low grade fever. She had history of open myomectomy 4 years back for menorrhagia with multiple fibroids (myomas). On examination, the pointing sign, Rovsing's sign, McBurney's sign & Blumberg's sign were positive; and clinically diagnosed as a case of acute appendicitis. Investigations suggested no pathological lesions other than appendicitis. Appendix was found inflamed, swollen

1. Assistant Professor, Department of Surgery, Bangabandhu Sheikh Mujib Medical University (BSMMU)

2. Consultant Gynaecologist, CME, Mohakhali, Dhaka.

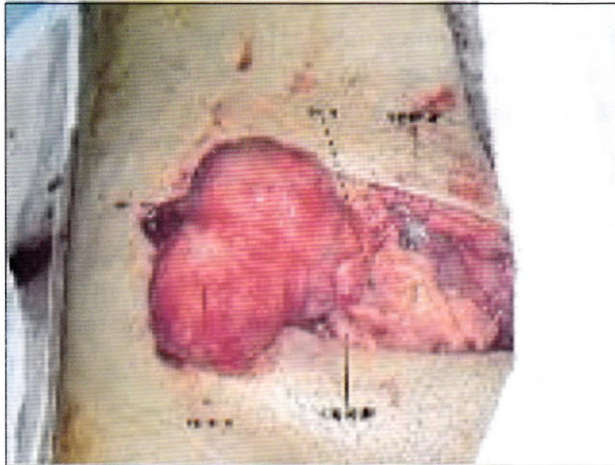
**Correspondence to:** Dr. Md. Manir Hossain Khan, Assistant Professor, Department of Surgery, Bangabandhu Sheikh Mujib Medical University (BSMMU), Phone: 01715024896, E-mail: dmanirhk@yahoo.com

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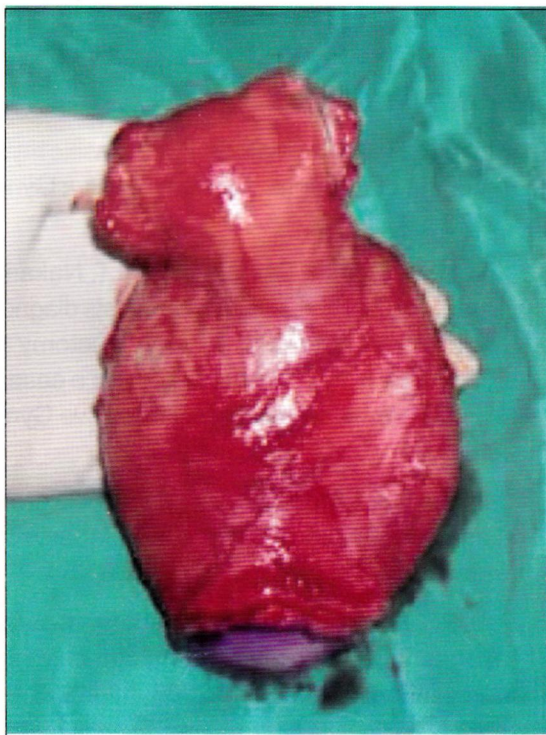
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and there was collection of fluid in the peritoneal cavity. During closure, incidentally a solid mass measuring about  $5 \times 4 \times 2.5$  cm was found in extra pritoneal space near the incision extraperitoneal space. The mass was excised and subsequently histopathology confirmed a leiomyoma (Myoma or parasitic fibroid).

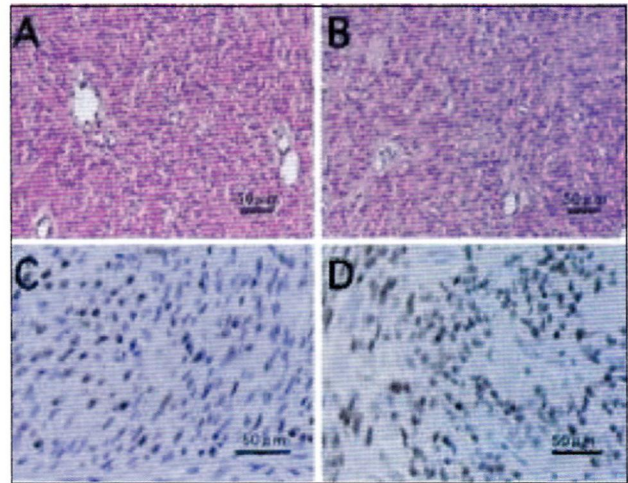
Histopathology of vermiform appendix was acute appendicitis. The postoperative period was uneventful. The patient was discharged on 5<sup>th</sup> postoperative day and regular follow-up was done upto 6<sup>th</sup> months, without having any clinically significant problem.



**Fig.-1:** Parasitic myoma during operation



**Fig.-2:** Excised parasitic myoma



**Fig.-3:** Histology of parasitic myoma

### Discussion:

Since Kelly and Cullen wrote of parasitic fibroids in 1909,<sup>1</sup> two theories for their pathogenesis have arisen. The first suggests that parasitic myomas are a rare variant of pedunculated subserosal myomas. It has been suggested that if a pedunculated subserosal myoma develops a long stalk and becomes what is termed a wandering or migrating leiomyoma. Such a tumour can then go on to adhere to surrounding structures such as the omentum or broad ligament and develop an auxiliary blood supply. In this way a parasitic myoma is formed when a wandering myoma loses its uterine blood supply and becomes attached and fed from a non uterine source. More recently a second theory has evolved which suggests that iatrogenic parasitic myomas may be caused by the seeding of a portion of a fibroid during morcellation at the time of myomectomy or hysterectomy.<sup>2-4</sup> The thought is that morcellation increases the possibility of living fragments of myoma that go on to implant in normal tissue anywhere in the peritoneal cavity. The incidence of iatrogenic parasitic myoma in the literature has increased since the introduction of laparoscopic techniques.<sup>2-6</sup> A third theory is intravascular leiomyomatosis and benign metastasizing leiomyomatosis and de novo formation from smooth muscle metaplasia of pluripotential cells as theorized in cases of leiomyomatosis peritonealis disseminata.

The greatest risk factor for the development of parasitic myomas is the presence of uterine leiomyoma. The next most frequent risk factor is a history of prior morcellation of the uterus or myomas by laparoscopically or by open procedure. In this case the parasitic myoma may arise from subserous

pedunculated fibroid by natural process which was unnoticed during myomectomy or a fragment of myoma may retained and get blood supply from abdominal wall and grow there. In a case series of 12 parasitic myoma, 8 had a prior myomectomy-six performed laparoscopically and two performed by laparotomy.<sup>7</sup>

Advances in retrieval systems have made laparoscopic myomectomy a feasible option, irrespective of size, site or number of myomas.<sup>8</sup> After laparoscopy, the enucleated myoma can be retrieved by minilaparotomy, colpotomy or by morcellation into smaller fragments. Tissue morcellation, especially in large myomas, may be very time consuming, and tissue pieces may be spread in the abdominal cavity. The advent of electromechanical morcellators have aided in the retrieval of large masses laparoscopically. It is essential for the surgeon to keep watching for falling pieces during morcellation and effort should be made to remove every single piece to prevent retained fragments. These retained fragments usually get infarcted and present with abdominal pain, which necessitates immediate removal of the mass. There have been reports of retained tissue becoming necrotic and causing severe peritonitis.<sup>9</sup> Very rarely like in our case, the retained fragment can take blood supply from an adjacent organ and grow. They can cause symptoms or sometimes they can just be incidental finding on imaging.

There is a report of a uterine leiomyoma particle growing in an abdominal wall incision after laparoscopic retrieval, suggesting inadvertent implantation at the site of removal through the trocar sleeve.<sup>5</sup> Hutchins and Reinoehl reported about a retained myoma after laparoscopic supracervical hysterectomy with morcellation. They retrieved a 5 × 4-cm infarcted myoma by exploratory laparotomy.<sup>10</sup> There are reports of myomas that have spontaneously lost their connections to the uterus and parasitized other blood supplies. The author has reported a case of parasitic myoma under the dome of the diaphragm.<sup>3</sup> The exposure of these tumors to steroid hormones and growth factors plays an important role in their growth. The authors have also reported two cases of large multiple leiomyomas developing after laparoscopic hysterectomy.<sup>11</sup>

This case report suggests a complete and thorough inspection of abdominal cavity remains an important aspect of pelvic surgery. Given the potential sequelae

of retained fragments, careful attention to remove all residual specimens is warranted. Placing the patient in reverse Trendlenburg position after morcellation and copiously irrigating the abdomen and pelvis may be helpful in washing small pieces into the pelvis.<sup>12</sup> Whether access is by laparotomy or by laparoscopy, meticulous attention should be paid to basic surgical principles, including attention to complete removal of small fragments of fibroid that maybe buried under bowel or bladder or stuck in cannulas and wedged in abdominal wall.

#### Conclusion:

Parasitic myomas may occur spontaneously as pedunculated subserosal myomas loose their uterine blood supply and parasitized to other organs. More parasitic myomas may be iatrogenically created after surgery, particularly surgery using morcellation techniques. With increasing rate of laparoscopic procedures, surgeons should be aware of the potential for iatrogenic myoma formation, their likely increasing frequency and intraoperative precautions to minimize occurrence.

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