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An Unusual Case of Parasitic Leiomyoma with Serpentine Omental Blood Vessels: A Case Report

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Abstract: Leiomyoma is considered as commenest benign tumour of the genital tract. This case represents a rare case of a large parasitic leiomyoma in the peritoneal cavity deriving its blood supply from the omentumin a 37 years old, multiparous woman who presented with a history of progressive abdominal distension. On examination, a mobile ill-defined centrally located intra-abdominal mass. It was at laparatomy that the diagnosis was made where a parasitic fibroid attached to the greateromental with avascular uterine pedicle which was reported as a leiomyoma on histological report. The patient had an uneventful post-operative recovery. She has been followed up for 12 months with no evidence of recurrence or residual disease.

Key words: Parasitic leiomyoma, uterus, greater omentum, serpentine, diagnosis

INTRODUCTION

Leiomyomata (uterine fibroids) are the most common tumours of the female pelvis. About 20% of all women have one or more leiomyomata present in the uterus at death (Agorastos *et al*., 2001). When asubserous fibroid becomes adherent to other structures, especially the omentum they obtain their blood supply from such structures and the uterine pedicle either disappears completely or becomes avascular. The tumor becomes known as parasitic or ectopic leiomyoma. When this occurs the presentation is different (Agorastos *et al*., 2001).

Imaging studies such as Magnetic Resonance Imaging (MRI) and ultrasonography aid in the diagnosis of uterine fibroids but in some circumstances, such as the case presented they can be misleading or may not help to ascertain the diagnosis. The omentum is composed principally of fat but also contains blood vessels and lymphatics. The omentum is lined by mesothelial cells and within its abundant stroma are lipocytes, fibroblasts, lymphoreticular bodies and pericytes. Primary tumours of the omentum are by far less common than secondaries (Cucinella *et al*., 2011). A case report of a large parasitic leiomyoma is presented.

CASE REPORT

A 37 years old woman with two living children, presented to the gynaecology clinic of the hospital with a history of fullness during feeding, abdominal pain and distention. The patient was having normal and regular menstrual cycles. There was no associated vaginal discharge, no respiratory difficulties and gastrointestinal symptoms. The patient had an earlier myomectomy 6 years ago.

The abdomen was distended extending to the Xiphisternum. Multiple masses were felt all over the abdomen. Some of the masses were firm and some cystic, no tenderness was elicited. Other organs could not be felt. There was no ascites.

The hemoglobin was 10.6 g dL^{-1}. The abdominopelvic ultrasound showed a bulky uterus with nearly 15×15 cm query large fundal subserous fibroid. Doppler blood flow study showed that the blood supply was away from the uterus. Ovaries, spleen, liver and pancreas are all normal.

She underwent exploratory laparotomy. At laparotomy a multi-lobulated fibroid like mass densely adherent to the greateromentum was seen. It derived its blood supply from the greater omentum with a huge serpentine and spider shaped blood vessels of nearly 1 cm diameter. It was attached to the fundus of the uterus by a thin avascular stalk (Fig. 1 and 2).

The intestines were pushed to the upper half of the abdomen. All other organs including the ovaries were normal. Resection of the mass and partial omentectomy was done. The patient had a smooth recovery. The histology report confirmed leiomyoma with degenerative changes and a normal omental tissue.

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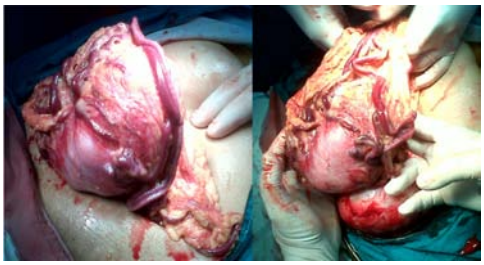

Fig. 1: Fibroid mass receiving blood supply from huge omental blood vessels

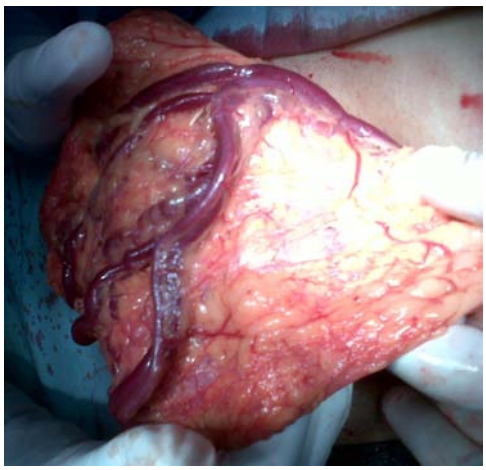

Fig. 2: The huge omental blood vessels supplying the fibroid

DISCUSSION

Leiomyomata (uterine fibroids) are the most common tumours of the female pelvis (Agorastos *et al*., 2001) and in most cases, the diagnosis is straightforward but when they undergo pathological changes they pose diagnostic and management difficulties (Epstein *et al*., 2009). The patient falls into the latter group. When a subserous leiomyoma outgrows its blood supply from the uterus it acquires new blood supply from the structures it is adherent to. Such structures include the omentum (Takeda *et al*., 2007), common iliac artery (Phupong *et al*., 2003) and inferior mesenteric artery (Odofin *et al*., 2004). Its connection with the uterus is severely attenuated or completely severed. It is now known as parasitic leiomyioma. Most of the reported cases of parasitic leiomyoma, the diagnosis was made at surgery. Some cases will require histological or immunohistochemical studies to confirm the diagnosis (Odofin *et al*., 2004). Parasitic leiomyomas, though infrequent are most commonly located in the broad ligament, pelvic peritoneum, cul-de-sac, small intestine and omentum (Fasih *et al*., 2008).

Therefore even though, parasitic leiomyomata are rare tumors, they should be included in the differential diagnosis of pelvic or abdominal tumours in female subjects. Furthermore, when the parasitic fibroid attains a large size it might outgrow its new blood supply and undergo further pathologic changes known as degeneration. The common types of degeneration are hyaline, cystic, mucoid and red (Thian *et al*., 2009; Buhimschi and Marvel, 2001; Al Manasra *et al*., 2011). In the case presented, the degeneration was cystic in some areas and hyaline in others. Calcification was also observed.

Ultrasonography and MRI are the best imaging methods for diagnosing parasitic leiomyomas. The Doppler can establish that the blood supply to the mass is not from uterus and from adjacent organs. The MRI can show that the mass is not continuous with the uterus. Once the diagnosis is made before the surgery is begun, the surgeon is better prepared before the start of the procedure (Fasih *et al*., 2008).

This is an interesting and relevant case report, especially in this era of minimally invasive surgery where more and more myomectomies are being performed by laparoscopy or with the use of robotic technology. In these situations, it becomes mandatory to use morcellator for fibroid removal and if adequate precaution is not take to remnants can very easily be left behind. These retained fragments get dislodged in the peritoneal cavity and then take blood supply from adjacent structures and grow. These could be the source of future parasitic fibroids in these patients requiring further surgical intervention. In post myomectomy cases pelvic mass should have parasitic fibroid as a differential diagnosis. Such parasitic myomas in post myomectomy cases are also called Iatrogenic myomas (Jebunnaher and Begum, 2013).

Parasitic fibroids can be managed safely with minimally invasive surgery if the surgeon has adequate experience. Now-a-days , advances in retrieval systems have madelaparoscopic myomectomy a feasible option, irrespectiveof size, site or number of myomas (Sinha *et al*., 2008).

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