



EXTRA UTERINE LEIOMYOMA- A DIAGNOSTIC CHALLENGE & LAPAROSCOPIC MANAGEMENT

Dipak Limbachiya and Neha Rani*

Department of Obstetrics and Gynaecology, EVA Endoscopy Training Institute,
Ahmedabad, Gujarat, India

ARTICLE INFO

Article History:

Received 16th October, 2017
Received in revised form 10th
November, 2017
Accepted 26th December, 2017
Published online 28th January, 2018

Key words:

Morcellations, Myomectomy, Mullerian
System, Dissemination

ABSTRACT

Extrauterine fibroids often present a diagnostic challenge due to the unusual locations they arise from. We present a series of rare extrauterine fibroids. In recent years, these fibroids have been associated with previous morcellated hysterectomies or myomectomies. Our series of two patients were found to have extrauterine fibroids (confirmed through histology) and underwent laproscopic hysterectomy and myomectomy. Both had undergone previous laparoscopic myomectomies. Postsurgical occurrence may be caused by incomplete removal of morcellated fibroid tissue. Spontaneous occurrence can be associated with congenital Müllerian system defects. Extrapolating from this hypothesis, we recommend physicians to make sure that counselling for extrauterine seeding and dissemination is undertaken in cases of minimally invasive surgeries where morcellation is expected. Long-term tumour surveillance is thus essential in such instances.

Copyright©2018 Dipak Limbachiya and Neha Rani. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Extrauterine fibroids are extremely rare. They are a diagnostic challenge due to the unusual locations that they arise from. Their differential diagnoses include parasitic leiomyoma (PL), disseminated peritoneal leiomyomatosis, uterine-like mass lesions, adenomyoma, endometriosis and leiomyoma with entrapped benign endometrial tissue.

In recent years, extrauterine myomas have been associated with previous morcellated hysterectomies or myomectomies. A larger case series by Kho and Nezhat reported 12 patients with parasitic myomas between 2000 and 2008. Ten of 12 patients had previous abdominal surgery, and 8 had history of morcellation procedures (six laparoscopically and two by laparotomy), highlighting previous morcellation as a high-risk factor for iatrogenic parasitic myomas.

CASE PRESENTATION

Case 1

A 31 years old patient, presented with complaint of dull pain in lower abdomen. She had past history of Laparoscopic myomectomy converted to Laparotomy 4 years back. During laparoscopic myomectomy in situ morcellation of cervical leiomyoma was done then massive haemorrhage occurred, hence it was converted to laparotomy. Her MRI of abdomen and pelvis revealed a well defined multilobulated altered signal intensity lesion in left adnexa measuring 109 x 47 mm.

**Corresponding author: Dipak Limbachiya*

Department of Obstetrics and Gynaecology, EVA Endoscopy
Training Institute, Ahmedabad, Gujarat, India

Similar lesion seen on right anterior abdominal wall at the level of iliac wing measuring 46x 25 mm and also one similar lesion indenting segment VI of liver measuring 46 x 30 mm. ? peritoneal leiomyoma. Left ovary appeared normal. A right ovarian cyst of 46x 33 mm with thin septations seen. Blood investigations were normal. Patient was taken for laparoscopy. Intra operatively, a big multilobulated leiomyoma situated and surrounded by sigmoid colon mesentery, multiple leiomyoma were on omentum, a big leiomyoma below right lobe of liver behind gallbladder, small leiomyoma on rectum, a big leiomyoma on previous scar site, a nodule located on isthmus (previous operated site). After assessment of all these, first sigmoid colon mesentery leiomyoma was enucleated and mesentery sutured with vicryl 2.0.

Omentectomy done to remove all leiomyoma from omentum. Intra operatively, GI surgeon assessed leiomyoma underlying liver and was enucleated. All leiomyoma were enucleated from lateral surface of rectum, on peritoneum and over anterior abdominal wall on previous scar site. Urinary bladder was separated with Harmonic scalpel to remove nodule which was densely adherent to isthmus, during separation it was identified as adenomyoma. Morcellator inserted through 11 mm supraumbilical port under vision of 5 mm telescope and morcellations of all fibroids done and removed. Adenomyoma and omentum were sealed in endobag and removed through a posterior colpotomy.

Total blood loss around 150 ml. Total duration of surgery 4 hours. Patient was discharged on day 3



Case 2

A 40 year old multigravida presented to OPD with complaints of lower abdominal pain and menorrhagia and constipation since 3 months. She was having 28-38 day menstrual cycle with heavy menses for 4-5 days per cycle. She had 2 normal vaginal deliveries. She had past history of laparoscopic cystectomy plus myomectomy in 2014. On ultrasonography, 12.8 x 11.2 x 11.2 cm sized solid hypoechoic lesion seen in right adnexal region with volume of 820 cc with internal vascularity. Lesion was adherent to uterus and right ovary. Patient was posted for laparoscopy.

In intra operative findings, there was a large 12 x 12 cm sized leiomyoma over the omentum and transverse colon with vascular pedicle. It was dissected out with harmonic scalpel and partial omentectomy was done. Total laparoscopic hysterectomy was done with both uterines ligated at origin with both ureters under vision. Leiomyoma specimen was manually morcellated via colpotomy.

Estimated blood loss negligible and total duration of surgery was 90 min.



DISCUSSION AND CONCLUSION

Both patients in our case series were found to have leiomyomas through histology. Parasitic leiomyoma develop when they are pedunculated off the uterine serosa or when fragments of a fibroid detach and implant and grow within the peritoneal cavity. They recruit additional blood supply from nearby organs, but do not directly affect endometrial blood

flow. This phenomenon was recently reported to be more commonly associated with morcellated hysterectomies or myomectomies.¹⁻³ Disseminated leiomyoma is characterised by the presence of multiple smooth muscle growths in the peritoneal cavity. The possible causes could be either hormonal, subperitoneal mesenchymal stem cells metaplasia, genetic, or iatrogenic after morcellation of myoma.^{4,5}

All the three of our cases, had previous laparoscopic myomectomies, which predisposed them to developing extrauterine fibroids. With the advent of the power morcellator, the number and the size of fibroids that can be removed through laparoscopy increased exponentially. A power morcellator is a hollow cylindrical instrument that penetrates the abdominal wall, ending with sharp cutting blades, through which a grasper can be inserted to pull the myoma into the cylinder to cut out extractable pieces. Morcellation is associated with spreading of cellular materials of the morcellated tissue. These loose fibroid fragments may become infarcted, necrotic or even parasitic and disseminated if they are left behind.³ In addition, there is a risk of disseminating unexpected malignancy with an increase in mortality. The rate of unexpected sarcoma after morcellation is 0.09%. Disseminated disease occurred in more than half of the cases.⁶ We note a previous report of leiomyoma growing in an abdominal wall incision after laparoscopic retrieval suggesting implantation of the fibroid at the port site during removal.⁷ These cases had a similar parasitic fibroid at the previous laparoscopic port site. We emphasise the importance of careful and diligent removal of every single morcellated fibroid specimen. Special attention should be paid to falling pieces during morcellation and removal via the port site. Reverse trendelenburg position after morcellation and copious peritoneal lavage followed by a thorough inspection is recommended to aid the removal of remnant myoma pieces.³

References

1. Kho KA, Nezhat C. Parasitic myomas. *Obstet Gynecol* 2009; 114:611-15.
2. Cucinella G, Granese R, Calagna G *et al.* Parasitic myomas after laparoscopic surgery: an emerging complication in the use of morcellator? Description of four cases. *Fertil Steril* 2011; 96:90-6.
3. Sinha R, Sundaram M, Lakhota S *et al.* Parasitic myoma after morcellation. *J Gynecol Endosc Surg* 2009; 1:113-15.
4. Al-Talib A, Tulandi T. Pathophysiology and possible iatrogenic cause of leiomyomatosis peritonealis disseminate. *Gynecol Obstet Invest* 2010; 69:239-44.
5. Momtahan M, Nemati M, Safaei A. Disseminated peritoneal leiomyomatosis. *Iran J Med Sci* 2011; 36:57-9.
6. Seidman MA, Oduyebo T, Muto MG *et al.* Peritoneal dissemination complicating morcellation of uterine mesenchymal neoplasms. *PLoS ONE* 2012; 7:e50058.
7. Ostrzenski A. Uterine leiomyoma particle growing in an abdominal wall incision after laparoscopic retrieval. *Obstet Gynecol* 1997;89:853-4