Case Report

Conjoint Presentation of Large Parasitic Leiomyoma and Serpentine Omental Blood Vessels: A Distinctive Case

Rubina Mushtaq[1], Khalida Parveen[2], Shaista Ambreen[3]

[1] Professor of Obs and Gynae, [2,3]Consultant gynaecologist, Department of Obs & Gynae, Combine Military Hospital CMH, Rawalpindi,

***Address of Correspondence**: Maj Dr. Khalida Parveen,*
E-mail: khalida83arain@gmail.com

Abstract

Leiomyoma is considered as the commonest benign tumor of the genital tract. This case represents a young unmarried lady who presented with a history of progressive abdominal distension for 6 months. On examination, a mobile, centrally located intra-abdominal mass was found. At laparotomy a parasitic fibroid deriving blood supply from greater omentum was seen. Resection of the mass was performed after ligating large worm like emerging blood vessels. The patient had an uneventful post-operative recovery. Histopathology revealed hyalinized leiomyoma.

Cite this article as: Mushtaq R, Parveen K, Ambreen S Conjoint Presentation of Large Parasitic Leiomyoma and Serpentine Omental Blood Vessels: A Distinctive Case. J. Soc. Obstet. Gynaecol. Pak. 2017; Vol 7(2):106-109.

Case Report

A young 28 years` old lady presented with painless mass and abdominal distension for 6 months duration. Initially she remained asymptomatic except vague abdominal discomfort, especially after meals.

But in next few months this swelling increased in its size upward and laterally she developed difficulty in passing stool, in the initiation of micturition and sometimes urgency. There was no history of nausea, vomiting, loss of appetite and weight loss.

Menarche was at 13 years of age and no menstrual irregularity was reported. The patient denied any sexual activity or use of any associated medication. Her past medical and surgical history was not significant. There was no history of secondary amenorrhea.

Abdominal examination revealed symmetrically distended abdomen with centrally averted umblicus moving with respiration. On palpation a non-tender abdominopelvic mass was found occupying the whole abdomen up to xiphisternum mobile laterally and restricted motility in craniocaudal direction. Other organs could not be felt. There was no ascites.

The hemoglobin was 12.3gm%, the abdominopelvic tomography showed normal sized uterus with nearly 10.3 x 17.6 x 19.4 cm in size mass occupying whole peritoneal cavity, displaced bowel upward and laterally, solid in nature with an area of mostly of uterine in origin. The bilateral adnexal cysts measured 5 x 4.5 x 5.9 cm on left side and 1.7 x 1.4 x 2.1 cm on right side.

After preoperative preparation patient was planned for laparotomy, the abdomen was openned through mid-line incision. Large dilated worm like vessels were protruding out, large parasitic fibroid extended from pelvic floor to epigastrium having large blood vessels which were derived from omentum (Figure 1 & 2).

The incision extends up to epigastrium, after careful delivery of mass it was found to be attached by small pedicle with the fundus of the uterus, bilateral ovarian mass (dermoid cyst) was also found about 5 x 6 on left side and 1.5 x 2 cm on right side.

Unusual large blood vessels between parasitic fibroid and omentum clamped, tied and cut very carefully due to the risk of massive hemorrhage, pedicle between uterus and fibroid clamped, cut and ligated Figure 3. Bilateral ovarian dermoid cyst removed with preservation of both ovaries.

Homeostasis secured, intraperitoneal drain placed. The resection specimen was 6 kg in weight and dimensions were 20x16cm (Figure 4). Postoperative period was uneventful. Histopathology showed benign leiomyoma of the uterus with hyaline degeneration with bilateral dermoid cysts.

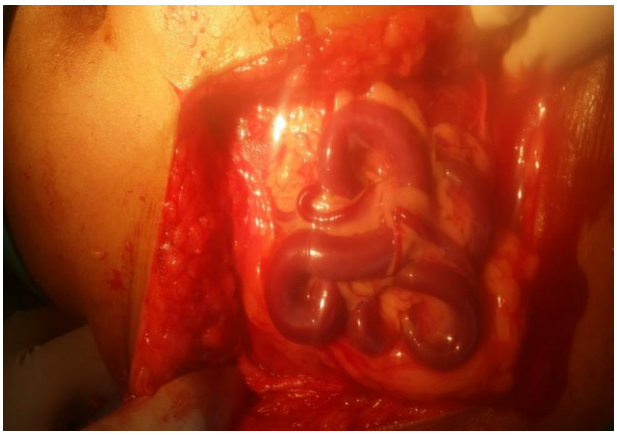

Figure 1. Serpentine Omental Blood Vessels

Figure 2. Large parasitic fibroid deriving blood supply from greater omentum

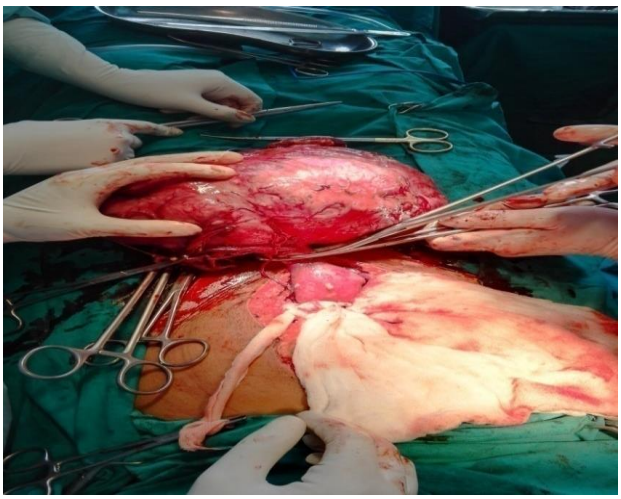

Figure 3. Resection of the mass was performed after ligating large blood vessels

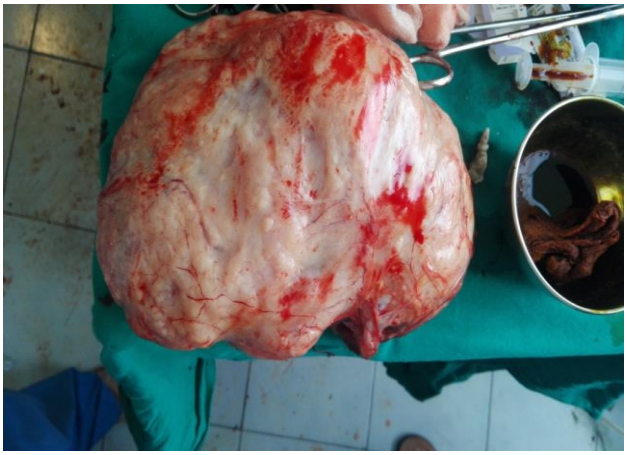

Figure 4. Large parasitic fibroid

Discussion

The parasitic leiomyoma is not very common but this benign tumor often presents in the female pelvis in the reproductive age group. It is asymptomatic in >50% cases and in about 80% of all hysterectomy specimens. Leiomyoma shrinks after menopause in the absence of post-menopausal estrogen replacement therapy.[1,2] A parasitic leiomyoma is a considered type of extra-uterine leiomyoma, it presents as a peritoneal pelvic benign smooth-muscle mass which is separate from the uterus whereas the uterine leiomyoma or fibroids are benign smooth muscle tumors of the uterus.

Tumors can arise in the smooth muscles of the extrauterine area like ovaries, urethra, vulva or urinary bladder. The most frequent risk factor of parasitic leiomyoma is thought to be uterine fibroid; however, other etiological sources should also be worked upon. Poliquin reviewed uterine fibroid cases between 1941 and 2077 and found that around 60% of the cases had no concurrent finding of uterine leiomyoma.[3] Moreover, Kang documented a case of multiple large leiomyomas isolated in retroperitoneum in absence of uterine myomas pointing out that rather than metastatic or parasitic nature, the lesions may have primary focal origination.[4]

Uterine fibroids affect around 235 million women around the world. The main factors are growth and location which determines whether the fibroid will result into larger problem[2]. Large lesions outside the uterus may not be that significant but even smaller lesions within the uterine cavity may be a significant symptom.[5] These neoplasms frequently cause

abnormal period, pelvic pain, and pressure symptoms. Large fibroids may sometimes cause hydro ureter later on leading to hydronephrosis and renal failure if not surgically removed.[6]

Fibroids are classified as i) subserosal fibroid project outwards from the uterine surface, covered with peritoneum, and may reach a very large size.Greater than 50% of the fibroid mass must project beyond myometrium for the fibroids to be classified as subserosal. ii) Intramural fibroid lie within the wall of the uterus and more than 50% of mass lie within the myometrial layer of the uterus. iii) Submucosal fibroids more than 50% of fibroid mass projects into the uterine cavity and is covered by endometrium. And iv) Cervical fibroids.

Subserosal fibroid also grows out in a papillary manner to become pedunculated fibroids. These pedunculated growths can actually detach from the uterus to become parasitic fibroids. The term parasitic fibroid was first defined by Kelly and Cullen in 1909 and they could either be primary or spontaneous, explained as pedunculated subserosal fibroid which develops a long stalk, outgrowing their uterine blood supply and subsequently receiving blood supply from another adjacent organ such as the bowel, peritoneum, omentum or mesentery and its connection with the uterus is severely attenuated or completely severed.[2,7] They could also be 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. A greater risk has been witnessed with laparoscopic management compared to open pelvic surgeries. This could be because of better awareness regarding detachment of uterus pieces and also more adequate washout of the field if opted open surgery.[8]

There are issues with histopathological confirmation of the disease due to large size, inadequate blood supply and exhibition of different types of degeneration of parasitic leiomyoma. The emerging role of histochemical diagnosis in these cases could be highly beneficial.[9,10]

Management of fibroids includes medical and surgical treatment individualized according to age, symptoms, and fertility status of the patient. Surgical approaches include myomectomy through the abdomen and laparoscopic myomectomy with morcellation. Medical treatment has no role in treatment of large parasitic fibroids like in this patient, surgical treatment options for fibroid like uterine artery embolization and laparoscopic myolysis also have limited role in large parasitic fibroid.[6]

Many investigators have suggested a direct association between the incidence of parasitic leiomyoma and the increase in laparoscopic procedures, this validates the concept that extrauterine leiomyoma can generate iatrogenically. There is a growing concern regarding risks associated with laparoscopic compared to open pelvic surgeries. This can be attributed to better awareness on detached pieces of uterus, and the ability to wash out the field more adequately in case of open surgery.[9-11]

In our patient, there was no prior history of surgery and it falls into the category of primary or spontaneous leiomyoma which outgrows its blood supply from the uterus and acquires new blood supply from omentum.

Conclusion

Large parasitic fibroids in young patients can be treated surgically with proper preoperative assessment and great intra-operative care so that damage to surrounding structure/visceral organs and iatrogenic complications may be avoided and to preserve the fertility of patient.

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