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CASE REPORT

Parasitic fibroid: a diagnostic dilemma

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ABSTRACT

Uterine leiomyomas are one of the most common tumours found in women of the reproductive age group. Parasitic or wandering leiomyomas are very rare extra-uterine benign tumours. Due to its rarity, atypical clinical presentation and unusual location, these tumours give big challenge to clinicians to reach correct diagnosis preoperatively. Therefore, having clinical suspicion and asking about previous surgical history (especially myomectomy or morcellation) are of utmost importance in making diagnosis. We present an interesting case report where primary parasitic fibroid was mimicking like an ovarian tumour on clinical examination, turned out to be subserous fibroid on ultrasonography and finally diagnosed as parasitic fibroid in the operation table.

Keywords: Wandering fibroid, Migrating fibroid, Ectopic fibroid.

A leiomyoma is a benign tumour composed mainly of smooth muscle cells but containing varying amount of fibrous connective tissue. Leiomyoma is the most common tumour amongst the tumours of the uterus. It is impossible to determine their true incidence accurately, although the frequently quoted incidence of 50 % found at post-mortem examinations seems reasonable [1]. As in one of the important findings fine serial sectioning of uteri from 100 consecutive women subjected to hysterectomy discovered fibroids in 77% of specimens [2]. The incidence increases with age 4.3 per 1000 woman-years for 25 to 29 years old and 22.5% for 40 to 44 year olds [2]. Higher incidence has been noted in African American than in Caucasian women [1].

They have been classified as submucous, intramural, subserosal and transmural fibroids. As per FIGO classification system, parasitic fibroids have been categorized as Type 8 leiomyomas with no myometrial involvement and uterine attachment [1]. Although first described by Kelly and Cullen in 1909, as "myoma that have for some reason become partially or almost completely detached from the uterus and receive their main blood supply from another source", the cause, natural history, and pathologic basis of parasitic myomas are still not clearly understood [3]. The conventional thinking is 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" [4] such a tumor can then grow on and adhere to surrounding

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structures such as omentum or broad ligament and develop an auxiliary blood supply. In this way, a parasitic myoma is formed when a wandering myoma lose its uterine blood supply and becomes attached and fed from a non-uterine source. Recently another theory has evolved which suggests "iatrogenic" parasitic myomas may be caused by the seeding of portions of fibroid remnants during morcellation at the time of myomectomy and hysterectomy [5]. Peritoneal metaplasia is another theory that describes the pathogenesis of myomas in unexpected fields of abdomen. The development of multiple nodules on peritoneal surfaces is referred to as leiomyomatosis peritonealis disseminata (LPD), which was first described in 1952 by Wilson et al [2].

Case Report

We report a case here of primary parasitic fibroid. 45years old female ,Para 3, Living3 tubectomised came to a gynaecology out patient department with chief complaints of pain and heaviness in lower abdomen since 1year and increased per vaginal bleeding with passage of clots during menses. She also complained of generalised weakness since 6 months. Patient was apparently alright one year back. Since last one year she had increased vaginal bleeding which was lasting for 8-10 days, getting her menses every 20 days with passage of clots and with soakage of 6-8 pads/day. Her last menstrual period was on - 26/11/2015. In her obstetric history, she had pervious full term normal vaginal deliveries, all home deliveries and uneventful. Her past history /personal/family history was not significant.

On physical examination, her general condition was fair, afebrile, vitals were stable, except that she had severe pallor. On per abdominal examination, inspection revealed distended lower abdomen. Uterus was 14-16wks sized palpable with irregular surface. There was a separate 15×10cm mobile mass, which was firm in consistency felt in lower abdomen occupying hypogastrium and lower umbilical region more on right side felt separately from uterus. Lower limit of mass could be reached. Dull note was present over mass. On per speculum examination cervix and vagina was healthy and bleeding was seen through os. On per vaginal examination revealed uterus of 14-16 weeks size with irregular surface mobile, non tender. A separate mass of 15×10cm size was felt high in right fornix separate from uterus. Mobility of mass was not transmitted to uterus. Groove sign was present.

On history and clinical examination the clinical diagnosis was uterine fibroid with separate pelvic mass probably ovarian was made. Patient was investigated further to confirm the diagnosis. On her ultrasonography uterus was 13×09×10cm size with multiple fibroids and large right sided pedunculated subserous fibroid of 12×8cm in size with bilateral ovaries normal. Her preoperative blood investigations were normal except for haemoglobin 5.7gm%. Patient was transfused with 3 pints of PCV. Patient was taken for exploratory laparotomy after adequate rise in haemoglobin.

A vertical midline infraumbilical incision was taken over abdomen. Abdomen opened in layers. A big mass of 15×10cm size was observed which had bosselated appearance with firm in consistency and was attached to peritoneum and omentum. To surprise there was no attachment to uterus. The diagnosis of parasitic fibroid also called as wandering fibroid was made on table. The mass was freed from omental and peritoneal attachment and pedicle clamped, cut and ligated with polyglactin 910 no.1, after confirming that there is no bowel adhesion or involvement. The uterus was noticed with irregular and bosselated appearance with 14wks size with multiple fibroids. Then total abdominal hysterectomy done. The cut open specimen of the mass revealed whorled appearance as well as uterus specimen also with multiple leiomyomas with whorled appearance. Her postoperative period was uneventful. Histopathology examination confirmed the diagnosis of leiomyoma.

Discussion

Parasitic leiomyomas are very rare extra-uterine tumors which are known for their atypical clinical presentation and unusual location, making clinical and

radiological diagnosis difficult for clinicians.The term Parasitic Leiomyoma was first coined by Kelly and Cullen in 1909 and they could either be 1) *primary or spontaneous* 2) *secondary or iatrogenic*, seeding a portion of the fibroid during morcellation and leaving

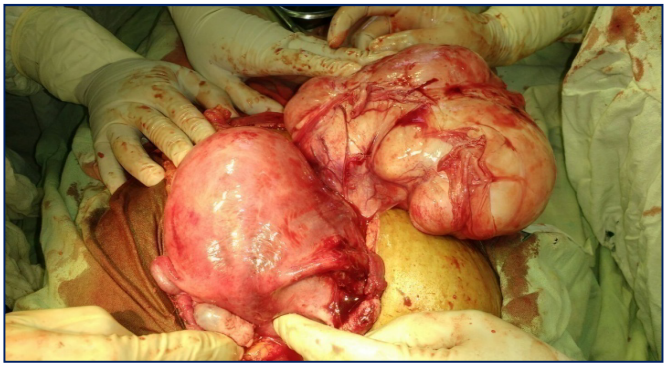

Figure 1: Laparotomy showing parasitic fibroid

behind a small fragment that implants to the normal tissue anywhere in the peritoneum [3]. Thus, they create clinical dilemma due to their tendency to mimic as other pelvic tumours. Thus parasitic myomas may be iatrogenically created after surgery, particularly surgery using morcellation techniques and emphasized that surgeons should be aware of the potential for iatrogenic parasitic myoma formation, their likely increasing frequency, and intraoperative precautions to minimize occurrence. Key to appropriate management lies in keeping them in mind as differential diagnosis of various abdominopelvic masses and making best use of imaging techniques in preoperative evaluation. Surgeons must be aware of rare complication (i.e. iatrogenic parasitic leiomyoma) of myomectomy procedures. A thorough inspection and washing of peritoneal cavity must be carried out during morcellation procedures and use of endoscopic bag. Differential diagnosis for parasitic leiomyomas includes ovarian masses (primary tumour or metastatic disease), broad ligament cysts, and lymphadenopathy. Transvaginal US may be of great help in diagnosing broad ligament leiomyomas because it allows clear visual separation of the uterus and ovaries from the mass. MR imaging, with its multiplanar imaging capabilities, also may be extremely useful for differentiating broad ligament leiomyomas from tubo-ovarian masses and from broad ligament cysts and also in differentiating them from solid malignant pelvic tumors [6]. As in most of the cases diagnosis of leiomyoma (uterine fibroids) is straightforward but when they undergo pathological changes they pose diagnostic and management difficulties. Most of the reported cases of parasitic leiomyoma, the diagnosis was made at time of surgery. In our case, the diagnosis was made on the table though the radiologist had given us the very good clue of subserous pedunculated fibroid. Some cases may require histological or immunohistochemical studies to confirm their diagnosis.

A large retrospective study was done by Gaspare et al to report the development of parasitic myomas after the use of a morcellator over 3 year study period in a tertiary care center. Out of 423 women, in whom electric morcellator was used, four cases were identified to have parasitic myomas with prevalence of 0.9% [7]. This study concluded that laparoscopic

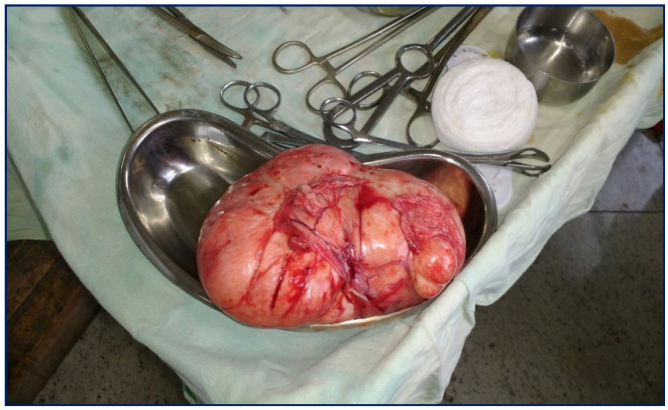

Figure 2: Specimen of parasitic fibroid

myomectomy with the use of a morcellator is associated with an increased risk of developing parasitic myomas. Therefore, a thorough inspection and washing of abdominopelvic cavity should be performed to prevent this rare complication. Another case report

published by Meenal et al also was a primary parasitic leiomyoma mimicking as ovarian mass like as in our case [8]. In another study Erenel et al. reported, 48 of 53 patients between 2007 and 2014 while most of these cases involved a history of morcellation [9].

Conclusion

Though parasitic leiomyoma are rare tumours, they should be included in the differential diagnosis of pelvic or abdominal tumours in female. Diagnosis of a parasitic leiomyoma should be considered if it is separate from the uterus and a pedicle is not visible connecting the uterus and the mass with blood flow away from the uterus.

Conflict of interest: None. **Disclaimer:** Nil.

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