Giant Bizarre Shaped Leiomyoma in the Folds of Broad Ligament in a Hysterectomised Woman

Surekha Tayade1* and Naina Kumar2

1Department of Obstetrics and Gynecology, Mahatma Gandhi Institute of Medical Sciences, India
2Department of Obstetrics and Gynecology, Mahatma Gandhi Institute of Medical Sciences, India

Abstract

Giant fibroids are known to arise from the uterus and very rarely from the broad ligament and that too after hysterectomy. We report an interesting case of broad ligament fibroid which developed after hysterectomy. The patient presented with incidental finding of a huge mass and pain in abdomen after 6 years of abdominal hysterectomy for multiple fibroids in uterus. Laparotomy was done which revealed a huge, bizarre shaped mass seen originating between the two folds of right sided broad ligament and completely occupying the whole pelvic cavity. Bilateral ovaries were normal. Histopathology of the mass confirmed it to be leiomyoma. This mass could probably be a remnant that has grown to this size taking blood supply directly from the internal iliac vessels as revealed on MRI. We report this case because it is a very rare entity to encounter such huge broad ligament fibroids occurring after removal of uterus.

INTRODUCTION

Uterine fibroids are the most common benign pelvic tumors in women of reproductive age affecting 20–40% [1] but are found in 75% of hysterectomy specimens [2]. Extra-uterine fibroid however is not as common as uterine fibroids. It may arise in the broad ligament or at other sites where smooth muscle exists [3]. The real incidence of broad ligament fibroid is not known. Fibroids commonly present as menstrual disturbances and reproductive dysfunction, whereas broad ligament fibroids present with pressure symptom like bladder and bowel dysfunction. Fibroids are notorious to recur especially after myomectomy. The quoted incidence is 5-30 %. However there is no available literature about the occurrence of leiomyoma after hysterectomy. We are presenting an unusual case of post hysterectomy leiomyoma arising from the folds of broad ligament and assuming huge and bizarre shape during its growth.

CASE REPORT

A 49 year old postmenopausal woman with two living children, reported to the outpatient unit of department of Gynecology of a rural tertiary care center of central India with complaints of mass in abdomen and abdominal discomfort since 2-3 years. It was gradual in onset and progressive in nature with history of rapid increase in size since one month to present size associated with heaviness in lower abdomen. There was history of incomplete voiding of urine since 2 months. Abdominal hysterectomy had been performed 6 years back for multiple fibroid uterus and menorrhagia at a private hospital. There was no history of sudden weight loss, anorexia or fever. There was no history malignancy in first degree relatives.

On physical examination the woman was a febrile, hemodynamically stable with normal vitals parameters. Respiratory and cardiovascular system had no abnormality. On per abdominal examination a huge irregular mass of 32-34 weeks gravid uterus size was evident which appeared to be arising from the pelvis. No dilated/engorged veins or visible peristalsis could be seen. On palpation the tumor was varying in consistency (soft to hard) with ill-defined margins mobile from side to side and non tender.

On per speculum examination cervix was not seen (consistent with history of hysterectomy) and vault was healthy. No abnormal discharge was seen. On bimanual examination, a huge irregular, multinodular mass, mobile of variegated consistency was felt filling the posterior and both lateral fornices. On per rectal examination, the mass was felt filling the whole of Pouch of Douglas and its upper extent could not be reached. The mass was freely mobile with irregular surface. Rectal mucosa was free.

iliac vessels. The tumor was bizarre shaped with multiple thick fingerlike projections entering into any free space which could be found in the loose pelvic tissue. There was no capsule and the tumor looked purple pink in color, soft to firm in consistency and smooth. Both ovaries were normal in look and placed in the ovarian fossa with part of fallopian tubes attached to them. The mass seemed to be arising between the folds of the pelvic tissue left behind after hysterectomy. After careful inspection and palpation both ureters were identified. The leaves of the broad ligament were opened carefully so as to protect the ureters from injury. Careful dissection was done to free the tumor from the tissue spaces which it had entered. It was mostly loose areolar tissue. The bowel was free from any adhesions. The huge mass was delivered out and carefully clamps were applied at the base of the pedicle. The mass was completely removed and sent for histopathological examination. Bilateral ovaries were also removed and sent for histopathological examination after careful dissection. Omentectomy was done. Pelvic lymph nodes were palpated and no enlargement was found.

On gross examination the mass was reddish, irregular shaped of around 2.5 kg and measuring 20 cm in length. Cut section showed atypical appearance with cystic and myxoid areas in between. Bilateral ovaries measured 3x2 cm. Microscopic examination of tumour revealed leiomyoma with cystic and myxoid changes and both ovaries were unremarkable. Postoperative period was uneventful and patient was discharged on day 9 after removal of sutures.

**DISCUSSION**

Fibroids or leiomyomas are smooth muscle tumors; benign in nature and closely related to anoulation and high levels of oestrogen. Extra uterine fibroids though do occur, are not as common as uterine fibroids. Among the extra uterine fibroids, broad ligament fibroids are the most common to occur [4] although its overall incidence is rare. Because of its rarity it poses specific diagnostic difficulties causing an error in making the final diagnosis and therefore the management. These fibroids are well known for achieving enormous size, which may mimic a malignancy of the pelvis [5]. Broad ligament fibroids are of two types: false broad ligament fibroid (uterine tumor which grows into the broad ligament) and a true broad ligament fibroid arising from the sub peritoneal connective tissue of the ligament [4]. Clinically, these lesions manifest as extra uterine pelvic masses that compress the urethra, bladder neck, or ureter producing symptoms of varying degrees of urinary outflow obstruction or secondary hydroureronephrosis [6]. On ultrasound, a typical leiomyoma with a whorled appearance, with variable echogenicity depending on the extent of degeneration, fibrosis, and calcification is seen [7]. Transvaginal ultrasound helps in diagnosing broad ligament fibroid because it allows clear visual separation of the uterus and ovaries from the mass. Magnetic Resonance Imaging (MRI), with its multiplanar imaging capabilities, may be extremely useful for differentiating broad ligament fibroids from masses of ovarian or tubal origin and from broad ligament cysts. The distinctive MRI appearances of typical fibroids also are useful in differentiating them from solid malignant pelvic tumors. This observation is important because broad ligament fibroids are associated with pseudo-Meigs syndrome and produce an elevated cancer marker CA-125 levels.
that may point to metastatic ovarian carcinoma, thereby causing diagnostic confusion [6]. Ultrasound-guided percutaneous biopsy of the tumor may be helpful for determining its exact histological composition before surgery.

Research indicates that the tumor results from a single progenitor smooth muscle cell which undergoes somatic mutation. Subsequent growth occurs by clonal expansion of the mutated myocyte [8]. In the present case it can be predicted that the tumor must have arisen from myocytes lying in the pelvic cellular tissue leftover after hysterectomy which assumed giant proportion after attaining direct blood supply from the major pelvic vessels. The intact active ovaries must have supplied the necessary estrogen rich environment for proliferation.

Besides genetic predisposition and ovarian hormones that play a major role in tumor expansion, a large number of growth factors have also been identified which favor expansion. These are IGF (Insulin like growth factor). EGF (Epidermal growth factor) and PDGF (Platelet-derived growth factor), TGF beta (Transforming growth factor beta) and BFGF (basic fibroblast growth factor) [8]. These may have role to play in the expansion of tumor in the present case.

Careful evaluation of the case intraoperatively and careful dissection during surgery provided successful outcome to the suffering woman.

CONCLUSION

Extra-uterine fibroids occur infrequently, although they are histological benign, may mimic malignant tumors at imaging, and may present a diagnostic challenge. The clinical symptoms and imaging features depend on the location of the lesion and on its growth pattern. So, the differential diagnosis of extra-uterine fibroid should be considered in cases of pelvic masses with normal uterus and ovaries. Careful evaluation and correct operative technique does provide good outcome even in giant bizarre looking tumors.

REFERENCES