

Fibroids at Unusual Sites: Diagnostic Dilemma

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ABSTRACT

Leiomyomas are the most common benign tumors of the uterus, occurring in 20-40% of women in reproductive age. Most of the myomas arise in the uterus, however rarely it may occur in extra-uterine sites like fallopian tubes, cervix, round ligament, broad ligament and urethra. Very rarely leiomyoma may arise from vagina, ovary and distal site like lung or vein. Because of their unusual sites they may present with varied symptoms and sometime may mimic like gynaecological malignancies. We are reporting four cases of extrauterine fibroid arising from vagina, ovary, broad ligament and posterior part of the cervix. All these cases were present to us with diagnostic dilemma and ultimately lead to a difficulty surgery.

Key words: Leiomyoma, Vaginal fibroid, Ovarian fibroid, Cervical fibroid, Broad ligament fibroid, Extrauterine fibroid.

1. INTRODUCTION

Leiomyomas are the most common benign tumours of the uterus, occurring in 20-40% of women in reproductive age (Neetu sangwan et al., 2010). Their classification is determined by their origin and the direction of growth. They are divided into three main groups subserous, interstitial and submucous. Most of the myomas arise in the uterus, however extrauterine sites include fallopian tubes, cervix, round ligament, ovary and urethra (Shalini agarwal et al., 2007). Leiomyoma developing de novo from the fibromuscular elements of the body is a rare entity. Uterine leiomyoma is often simple and definite diagnosis is possible from symptoms and clinical examination. But when fibroid present at

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unusual sites it often creates diagnostic dilemma because of its varied clinical presentation. Sometime even with advanced imaging techniques, it is difficult to diagnose preoperatively.

We came across four cases of fibroid originating from different extrauterine sites like vagina, ovary, broad ligament and posterior part of the cervix.

2. CASE ANALYSIS

Case 1 – Vaginal fibroid

Mrs Jk 50yrs para 2, post-menopausal since four years with bleeding and foul smelling discharge per vagina for one year. Patient was referred to our institute as a case of cervical cancer. On examination a 5 x 6 cm lobulated firm swelling was seen from anterior vaginal wall, 2 cm away from the urethral opening (Figure 1). The Mass was impacted deep into the vagina but on manipulation it was found to be mobile and attached to the vagina by a 1 cm stalk. There was a small decubitus ulcer over the mass. Cervix was visible separately (Figure 2). Computed Tomography (CT) scan showed a 4 x 4 cm lobulated mass originating from anterior vagina wall (Figure 3). There was no other extension of the mass. Pre-operative histopathology came out to be leiomyoma. We posted her for surgery but unfortunately patient didn't turn up.

Case 2 – Ovarian fibroid

Mrs. GS 50 yrs para 5, post-menopausal since five yrs, presented with pain and distension of the abdomen for one month. On clinical examination she had tense ascites with abdominopelvic mobile mass of 10 x 12 cm. Her CA 125 was 909 IU/ ml. CT scan showed right adnexal mass of 13.5 x 12.6 cm with moderate ascites and mild omentoperitoneal thickening.

Ascitic fluid cytology showed occasional cluster of cells with suspicious morphology. On exploration about 4 liters of free fluid was drained. Right ovary was enlarged, measuring about 12x 14 cm size and firm in consistency. Left ovary was bulky and firm in consistency. Uterus was of normal size. Other organs were normal. Total abdominal hysterectomy with right salphingo-ovariotomy and left salphingectomy with omentectomy was done (Figure 4). Histopathology confirmed bilateral ovarian fibroid, no significant mitosis and no abnormality in the omentum. Patient is on follow up for last two years and doing well.

Case 3 – Broad ligament fibroid

Mrs. KL, 45 year, Para 2, Living 2, came with the complaints of pain and lump in abdomen for 2 years. On examination there was a firm, large abdomino-pelvic mass with restricted mobility. All tumor markers were within normal limit and FNAC from the tumor showed spindle cell neoplasm. On exploration there was a large left sided broad ligament tumor that looked like a degenerated fibroid with solid cystic consistency (18 x 22 cm), the Left tube and ovary were stretched over the tumor. Uterus with bilateral tubes and ovaries were normal (Figure 5). She underwent Total Abdominal Hysterectomy with bilateral salphingoopherectomy with Broad ligament tumor removal on 22-11-2012. Histopathology confirmed the diagnosis of leiomyoma of broad ligament tumor.

Case 4 – Posterior cervical fibroid

Mrs. KT, 41 year old, para 5, with regular menstrual cycles, presented with distension and pain in the abdomen for last 1 year. She had history of rheumatic heart disease. On examination there was a large lower abdominal mass of 28 week size, firm in consistency, mobile, with irregular surface. Cervix was pulled up and not visible on per speculum examination. CT scan showed large lobulated abdomino-pelvic mass of 30.5 x 26 cm arising from the uterus & bilateral pelviccylial dilatation. On exploration- Uterus was of normal size, a multi-lobulated mass arose from the posterior surface of the cervix and occupying the whole abdomen. Lower 1/3rd of the left ureter was encased in the mass. Total hysterectomy with bilateral salphingoopherectomy was performed (Figure 6). The mass measured around 8 kg and there was intra-operative blood loss of three litres. Post-operative histopathology showed leiomyoma without any mitotic activity.

3. DISCUSSION

Leiomyoma is the most common indication for hysterectomy in women in their reproductive age group (Rajib et al., 2011). It is composed essentially of muscle tissue although there is a variable amount of fibrous connective tissue as well, especially in the older and larger tumors. Each individual uterine leiomyoma is monoclonal. It arises from a somatic mutation in a progenitor myocyte.

Multiple chromosomal abnormalities are detected in approximately 50% of leiomyomas, the commonest being translocation between long arm of chromosomes 12 to 14 followed by deletion on the long arm of chromosome Y (Jeffcoats Principles of Gynaecology 6th edn.. 2001).

The majority of leiomyomas arise from the body of the uterus and sometimes from cervix. The extrauterine sites are round ligament, uterosacral ligament, ovary, inguinal canal and very rarely vagina and vulva. They still grow in a benign fashion, but can be dangerous depending on their location. There are a number of rare conditions in which fibroids metastasize (Koh et al., 2000).

Since the first case of vaginal leiomyoma reported in 1733 approximately 300 cases of vaginal leiomyomas have been reported in world literature (Jeong- Hoon Bae et al., 2008). Most vaginal fibroid vary between 1 and 5 cm but some may reach upto 10 cm in size and weigh upto 1450 gm (Leron et al., 2000). In the early stage, they are generally asymptomatic, but with increasing size they may start compressing adjacent organs. Indeed, vaginal leiomyomas had been termed "the female prostate" (Leron et al., 2000). Our case was referred as a case of cervical cancer because of the history of discharge and postmenopausal bleeding per vagina and growth inside the vagina. Although rare, the most common mesenchymal neoplasm of the vagina is the leiomyoma. They may occur anywhere within the vagina and usually arise in the smooth

muscle layer of the midline anterior vaginal wall (Shimada et al., 2002). In 2002, Shimada *et al.* reported the first case of leiomyoma originating on the posterior vaginal wall which was associated with lumbar pain due to compression of the pelvic ligaments (Shimada et al., 2002). Another case of posterior vaginal wall fibroid growing up into the abdominal cavity and presenting as ovarian tumor was reported in 2006 (Gupta Vineeta et al. 2006). Like all leiomyomas, it is oestrogen-dependent, may present in some patients as menometrorrhagia or progress to degeneration. In a series of 11 cases with vaginal leiomyoma, 9.1% incidence of sarcomatous changes was reported (Dhaliwal et al. 1992). Enucleation from the vaginal approach is the treatment of choice for vaginal fibroid but final diagnosis is only possible after post operative histopathology.

Ovarian fibroma is relatively more common than vaginal fibroid with an incidence of 2 – 5 % in surgically removed specimen of ovarian tumor (Prasad K Shetty et al. 2010). Ovarian tumours are divided into epithelial, mesenchymal, from lipid cells, from germ (germinal) cells, gonadoblastomas, unclassified tumours of the ovary, and secondary ovarian cancers. Mesenchymal tumours are also called tumours from embryonal strips and in histological terms they consist of various cell types (granulosa cells, thecal, stromal, Sertolli and Leidig cells, cells resembling embryonic cells). They are further subdivided into tumours of granulosa cells (luteoma, sarcoid cells, theca granulosa), ovarian fibroma, thecoma, arrhenoblastoma, tumour from hilar cells, and gynandroblastoma.

Ovarian fibromas are benign usually unilateral, have a fascicular structure with necrotic centres and pseudocysts. They consist of elements of ovarian stroma. Sometimes they may present as a part of the Meigs' syndromes (Bibrova et al. 2004). In our case, it was bilateral ovarian fibroma with ascites only but no pleural effusion. . Because of high level of CA 125 and suspicious morphology of ascitic fluid preoperatively it was provisionally diagnosed as malignant ovarian tumour.

Among the extrauterine fibroids, broad ligament fibroids are the most common. Its overall incidence is however low. Occasionally, fibroids become adherent to surrounding structures like the broad ligament, omentum, develop an auxiliary blood supply and lose their original attachment to the uterus. Fibroids in the broad ligament are well known to achieve enormous sizes, which may mimic a malignancy of the pelvis thereby altering the course of treatment offered. They may associated with pseudo-Meigs syndrome and an elevated CA-125 levels that may point to metastatic ovarian carcinoma, thereby causing diagnostic confusion (Veronica Irene Yuel et al. 2006).

Degeneration is the common symptom in such a large leiomyoma. Degeneration usually starts from the center where the blood supply is the least. About 1- 4 % of fibroids occur in the cervix, most of them in the supravaginal portion.

Large fibroids may cause pressure symptoms. Enlargement causes upward displacement of the uterus and the fibroid may become impacted in the pelvis, causing urinary retention and ureteric obstruction. Treatment of cervical fibroid is either hysterectomy or myomectomy. They may give rise to greater surgical difficulty by virtue of relative inaccessibility and close proximity to bladder and ureter (Renu Garg, 2012). Our case of cervical fibroid also was surgically very challenging. Even after all necessary precautions, total intraoperative blood loss was 3 liter. In this series all four cases are histologically confirmed leiomyoma arising from extrauterine sites. First three cases were present as some form of gynaecological malignancies and diagnosis was only confirmed after postoperative histopathology. The last case though preoperatively diagnosed as leiomyoma, there was lot of intra-operative difficulties due to its anatomic location.

4. CONCLUSION

Fibroids are the most common benign tumours of the uterus. However, they can grow anywhere in the body with varied symptoms. Sometime it mimics like gynaecological malignancies and cause diagnostic dilemma. Their size, position, location and degenerations may also make the surgery challenging.

REFERENCES

1. Benign. Tumours of the corpus uteri. In : Jeffcoats Principles of Gynaecology 6th edn. Arnold Printers, London; 2001: pg 470
2. Bibrova S, Gal P. Giant ovarian fibroma- case study. *Scripta Medica (BRON)*, 2004, 77(4), 226-230
3. Koh DM, Burn PR, King DM. Benign metastasizing leiomyoma with intracaval leiomyomatosis. *British Journal of radiology*, 2000, 73, 435-437
4. Dhaliwal LK, Das I, Gopalan S. Recurrent leiomyoma of the vagina. *Int journal Gynecol obstet.* 1992, 37, 281-3
5. Gupta Vineeta, Arya Prafull, Gupta Vandana, Rawat DS. A rare case of vaginal fibroid presenting as ovarian tumor. *The journal of Obs and Gynecology of India*, 2006, 56(6), 537- 538
6. Jeong- Hoon Bae, Sea Kyung Choi, Jin woo kin. Vaginal leiomyoma: a case report and review of literature. *Journal of womens medicine.* 2008, 1(2)
7. Leron E, Stanton SL. Vaginal leiomyoma an imitator of prolapsed. *Int urogynecol J of pelvic floor dysfunction*, 2000, 11(3), 196-8
8. Neetu sangwan, Nirmala duhan, Daya siruhiwal, Nidhi rajotia. Cervical fibroid mimicking prolapsed. *JK science*, 2010, 12(1)
9. Prasad K Shetty, UD Bafna, K balaiah, Gnana Prakash S. Ovarian fibroma with meigs syndrome associated with elevated CA 125 – a rare case. *Online j of health and allied sciences.* 2010, 9(2)
10. Rajib M, Geetinder G, Shweta Y, Gumeet G, Chinky G. A case of retroperitoneal leiomyoma. *Case reports in surgery*, 2011, 8(2), 247-251
11. Renu Garg. Two uncommon presentation of cervical fibroids. *Peoples journal of scientific research*, 2012, 5(2), 36-8
12. Agarwal S, Yadav R, Sangwan K, Dahiya P. *Vaginal Leiomyoma: A rare cause of Menometrorrhagia. The Internet Journal of Radiology*, 2007, 9(1)
13. Shimada K, Ohashi I, Shibuya H, Tanabe F, Akashi T MR imaging of an atypical vaginal leiomyoma. *AJR Am Roentgenol.* 2002, 178, 752-4
14. Veronica Irene Yuel, Vaneet Kaur. Broad ligament Fibroid- an unusual presentation, *JK science*, 2006, 8



Figure 1
Vaginal Fibroid



Figure 2
Cervix seen separately from the vaginal fibroid

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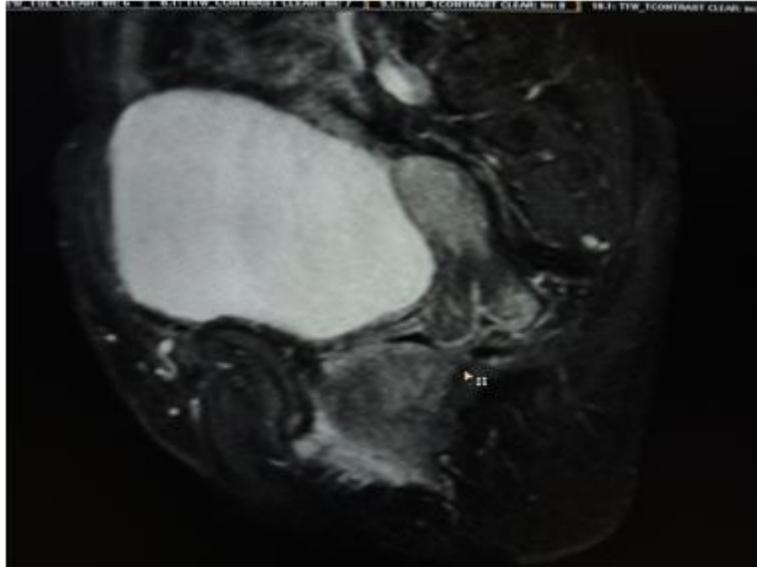


Figure 3
CT Scan showing normal sized uterus and lobulated mass originating from anterior vagina wall



Figure 4
Surgical specimen of ovarian Fibroid (cut section)



Figure 5
Intra op picture showing ovary and tube extending over the broad ligament tumor



Figure 6
Surgical specimen of posterior cervical fibroid