

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20184994>

## Case Report

# Unusual giant central cervical leiomyoma: surgical challenge

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**Received:** 06 October 2018

**Accepted:** 27 October 2018

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### ABSTRACT

Leiomyomas are most common uterine and pelvic tumours. The most common anatomical location is uterus. Fibroids arising from cervix are rare tumours accounting for 2% of all fibroids. A cervical leiomyoma is commonly single and is either interstitial or subserous, rarely it becomes submucous and polypoidal. Here authors report a case of huge cervical fibroid in an unmarried lady who presented to us with complaint of heaviness in abdomen. On per abdomen examination a firm mass of 32 weeks size arising from pelvis with restricted mobility was noticed. Ultrasound showed 21\*10.3\*10 cm heterogenous mass in pelvis with evidence of internal vascularity. MRI was suggestive of fibroid arising from body of uterus. True cut biopsy of the lesion was taken which showed benign lesion. Decision for myomectomy or Hysterectomy (according to intraoperative findings) was taken. While doing the procedure, after accidental ligation of left ureter and injury to bladder, diagnosis of cervical fibroid was made. Hence pre-operative diagnosis of cervical fibroid is very important in order to avoid damage to bladder and ureters.

**Keywords:** Cervical fibroid, Hysterectomy

### INTRODUCTION

Leiomyoma is the most common of all uterine and pelvic tumors. The incidence of leiomyoma is 20% in the reproductive age group, and only 1-2% are found in the cervix.<sup>1</sup> The paucity of smooth muscles in the cervix uteri makes the incidence of leiomyomas in this region a rare finding in clinical practice.<sup>2</sup> They arise from either supravaginal or vaginal portion of cervix. They are classified as anterior, posterior, lateral and central depending on their site of origin. Each fibroid presents differently. A central cervical fibroid is usually either interstitial or submucous in origin and arises from supravaginal portion of the cervix so that it expands the cervix equally in all directions.<sup>1,3</sup> The symptoms most commonly presented are retention of urine, menstrual abnormalities, constipation, and sometimes can present only as an abdominal mass without any other symptoms and may mimic an ovarian tumor too.<sup>4,5</sup> On laparotomy it can be recognized at once, as it fills pelvis, with uterus on top of

tumour like “Lantern on the top of St. Pauls” and poses practical problems during surgery.

Treatment options will be dictated by the presentation, patient's desires and the skills of the attending physician and can include resection which can be hysteroscopic or via open abdominal surgery, uterine artery embolisation/ligation, abdominal myomectomy or hysterectomy. If large, the patient may benefit from GnRH analogues to shrink it and thereby making it operable. This will reduce the chances of damage to contiguous structures such as the ureters and urinary bladder.<sup>6-8</sup>

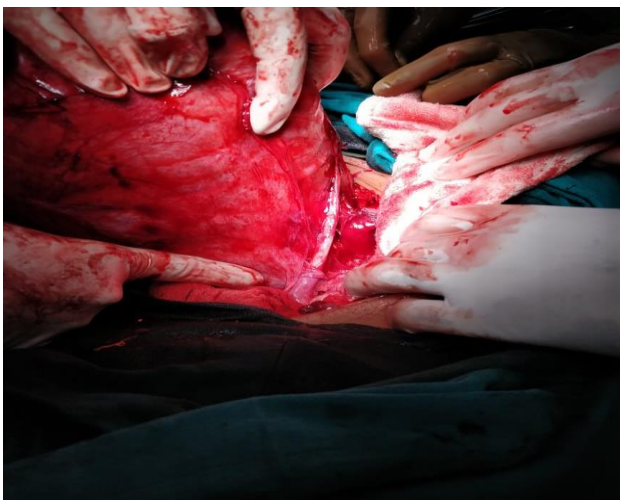
### CASE REPORT

Miss X 36-year-old unmarried lady presented at Government medical college, Chandigarh with complaint of heaviness and mass in abdomen for 6 months. There was no menstrual irregularity associated with it. After

taking consent of the patient her examination was carried out. On Physical examination she was anaemic and hypertensive. On per abdomen examination a firm mass of 32 weeks size arising from pelvis with restricted mobility was noticed. Digital Rectal examination showed a clean anal verge with normal sphincteric tone. The examining gloved finger felt the same mass protruding into the anterior rectal wall, but the rectal mucosa was preserved. The examining finger was soiled with well-formed stool.

Ultrasound showed 21\*10.3\*10 cm heterogenous mass in pelvis with evidence of internal vascularity. Uterus and bilateral ovaries were not separately visualized. MRI Scan was done with the following report: uterus was almost completely replaced by a large well defined heterogenous altered signal lesion measuring 20.9\*18.1\*10.7 cm. It showed relatively low signal in T1 as well as T2 images s/o fibroid. Multiple interspersed T2 signal was seen within the lesion suggestive of cystic changes. Thin continuous T2 hypointense capsule was seen along the periphery of the lesion. The uterine myometrium was possibly stretched along the anteroinferior aspect of the lesion s/o lesion arising from body of uterus. The UB was compressed and displaced anteriorly. The pelvic bowel loops, soft tissues and vascular structures were displaced peripherally by the lesion. Ovaries could not be identified separately.

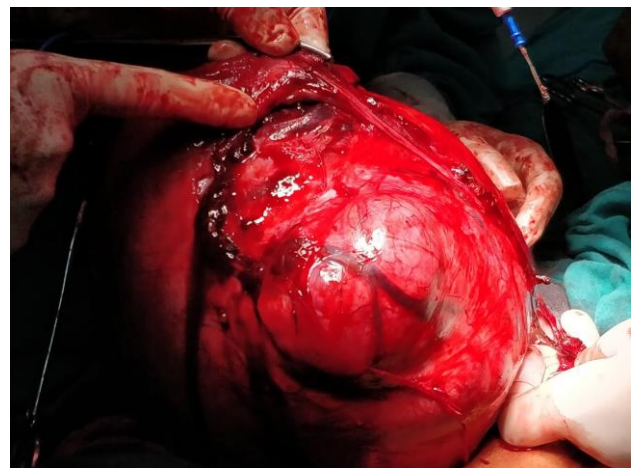
True cut biopsy of the lesion was taken. It showed a tumour composing of interlacing fascicles and bundle of smooth muscle cells with no significant mitosis suggestive of spindle cell tumour. She was counselled for myomectomy and total abdominal hysterectomy if the need arises according to intraoperative findings. Due to financial constraints, she did not receive prescribed gonadotropin-releasing hormone analogue. However, she took mifepristone for three months.



**Figure 1: Right sided ureter (intact).**

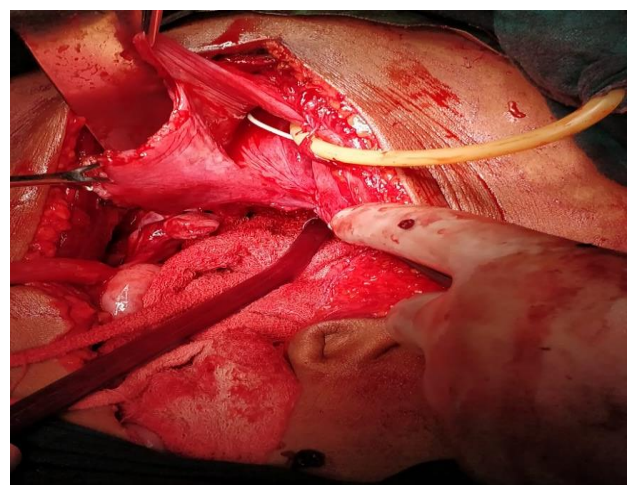
At laparotomy large mass was filling the whole abdominal cavity. On gross examination mass was huge,

smooth, round, regular, highly vascular with smooth upper border of mass. No uterine musculature could not be made anywhere. Bilateral tubes and ovaries were attached to upper part of mass. Bilateral round ligaments were highly stretched. Finally, decision for hysterectomy was taken. Round ligaments were cut clamped and ligated. While proceeding further during surgery, further clamps were applied. Bladder was highly pulled up. To open uterovesical fold, transverse incision was given high up after identifying loose fold of peritoneum. Bladder was further pushed down. Then opening of bladder was suspected and confirmed. Bilateral ureters were traced again, and left ureter was found to be already cut and ligated. Right ureter was intact (Figure 1) and rising from the pelvis towards the mass. Integrity was checked by putting infant feeding tube retrograde. Mass was reexamined, small stretched uterus was now seen sitting on the top of this mass (Figure 2). Diagnosis of cervical fibroid was made.



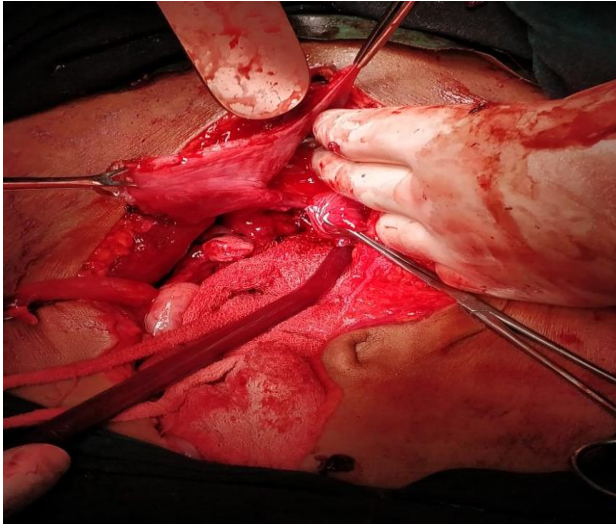
**Figure 2: Typical lantern on Paul appearance.**

Hysterectomy was completed. With the help of urologist, bilateral ureteric stenting (Figure 3) was done (right sided ureteric stenting done prophylactically).



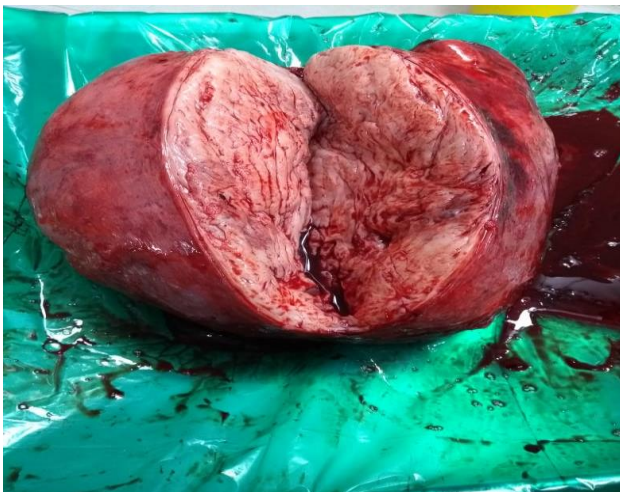
**Figure 3: DJ stenting being done.**

As there was defect of 8-10 cm of left ureter, so it was repaired by forming BOARI'S flap (Figure 4) and bladder repair was done.



**Figure 4: Creation of BOARI'S flap.**

Foley's catheter and intra-abdominal drain were kept in situ. Postoperative period was uneventful. Drain was removed on 7<sup>th</sup> day, Foley's catheter on 21<sup>st</sup> day and stents after 6 weeks and patient was discharged without any residual complications. On gross examination the mass (4.6 kg) lied in place of cervix and uterus was found perched on top of the mass. Cut section revealed a firm mass with whorled appearance and pseudocapsule (Figure 5). Histo-pathological examination confirmed the diagnosis of cervical fibroid.



**Figure 5: Cut section of cervical fibroid (4.6 kg).**

## DISCUSSION

Uterine leiomyoma is the most common indication of hysterectomy. Isolated cervical fibromyoma with intact uterus is not frequent. Huge cervical fibroids are uncommon. They are classified as: anterior, posterior,

lateral, central and multiple. Their incidence increases with age in women in the reproductive age group This is due to their dependence on the hormone oestrogen. The symptoms depend on the type. Anterior fibroid undermines the bladder while posterior compresses the rectum against sacrum. Lateral cervical fibroid burrows out into the broad ligament and expands it. The relation to the ureter is important. The ureter and uterine are always be extracapsular, lateral and posterior.<sup>9,10</sup> Central fibroid expands the cervix equally in all directions. Upon opening the abdominal cavity, a central cervical myoma can be recognized at once because the cavity of the pelvis is more or less filled by a tumor, elevated on the top of which is the uterus like the lantern on the top of St. Paul's.<sup>10</sup> Pre-operative diagnosis of cervical fibroid is very important .If proper pre-operative diagnosis is not made then accidental ligation of ureters and injury are bladder can occur. The operation for removal of cervical fibroid is hysterectomy, but it can be difficult, and may at times be an extremely formidable undertaking. The problems encountered during hysterectomy for cervical fibroid are: the uterine vessels-distortion of normal anatomy; bladder is pulled up; ureter distortion. Therefore, more chances of injury to ureter, bladder and uterine vessels.<sup>11,12</sup>

In present case diagnosis of cervical fibroid was made after accidental injury to left sided ureter and bladder. On the basis of ultrasound and MRI reports diagnosis of fibroid of body of uterus was made. Hence if preoperative diagnosis of cervical fibroid had been made, iatrogenic injury to these structures would have been prevented.

## CONCLUSION

Authors conclude that proper preoperative evaluation, preparation and knowledge of altered anatomical structures are important for performing hysterectomy for cervical fibroid.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Kaushal A, Kaur M, Bhalla V, Kaur D. Unusual giant central cervical leiomyoma: surgical challenge. Int J Reprod Contracept Obstet Gynecol 2018;7:5197-200.