

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20231240>

Case Series

## Cervical leiomyomas: a surgeon's challenge

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**Received:** 17 March 2023

**Revised:** 09 April 2023

**Accepted:** 10 April 2023

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### ABSTRACT

Leiomyoma are benign uterine tumors of unknown etiology. Only 5% of the cases are cervical and are usually single. Extraperitoneal leiomyomas leads to pressure symptoms. They may be submucosal, intramural or sub-serosal type. Anterior cervical fibroids are the most common. Central cervical fibroids are described as “The Lantern on the dome of St. Paul’s”. A retrospective clinical study of 6 cervical fibroids operated in the department of Obstetrics and Gynecology, in a tertiary care hospital in Mumbai for a period of 24 months from March 2021 to February 2022. Patients were studied with respect to clinical profiles, pre-operative investigations, intra- operative surgical challenges and post-operative surveillance. In our study we observed that cervical fibroids were most commonly diagnosed in the age group of 40-50 years, and most commonly in women of second parity. The most common presenting symptom was pain in abdomen. All patients underwent hysterectomy (abdominal or vaginal), wherein 16% of them required blood transfusion. The largest cervical fibroid operated was 20 x 12 x 10 cm in size with uterus corresponding to 22 weeks of gestation. Excision of cervical fibroids is a challenging procedure due to its close proximity to ureters. It is only with experience and with fine surgical skills that a good patient outcome can be achieved. Even after advent of various alternative management options, surgery remains the mainstay of treatment and is still a surgeon’s nightmare.

**Keywords:** Cervical leiomyomas, Hysterectomy, DJ stent, Ureteric injury, AA stitch

### INTRODUCTION

Leiomyomas are benign monoclonal tumors of myometrial origin. They are the most common benign tumors of the female genital tract. Prevalence of leiomyomas in the general population is ~35-50%.<sup>1</sup> Most of the cases are asymptomatic. Cervical Leiomyomas accounts for 5% of all leiomyomas. They can arise from supra-vaginal or vaginal portion of cervix. They may be submucosal, intramural or subserosal type.<sup>2</sup> Due to its close proximity to the pelvic viscera, such as bladder and rectum, they tend to cause increased pressure symptoms. It poses as a surgical challenge to operate owing to the relative

restricted operative field and deformed anatomical relationship.

### CASE SERIES

A retrospective clinical study of 6 cervical fibroids operated in the department of Obstetrics and Gynecology, in a tertiary care hospital in Mumbai for a period of twenty-four months from March 2021 to February 2022. Patients were evaluated based on clinical profiles, pre-operative investigations, intra- operative surgical challenges and post-operative surveillance.

Pre-operatively all patients were watchfully examined and evaluated. Routine blood investigations were done. The nature of the fibroids was assessed with respect to the location, size, number, relation to the endometrial cavity and proximity of the ureters to the lesion by radiological methods- mainly ultrasonography.

### Case 1

A 45-year-old female, P2L2 with complaints of pain abdomen. Per abdomen: uterus was corresponding to 22 weeks of gestation, had a bosselated surface, firm in consistency and was freely mobile. Per speculum: cervix taken high up. Per vagina: uterus corresponding to 20-22 weeks of gestation. Mass felt on the posterior wall of the cervix with fullness in the lateral and posterior vaginal fornix. Ultrasound: a heterogenous lesion arising from posterior aspect of the cervix and lower part of the uterus of 20x12x10 cm suggestive of cervical fibroid with bilateral Hydroureteronephrosis. Management: total abdominal hysterectomy with bilateral salpingectomy. Histopathological report: cervical leiomyoma.



Figure 1: Preoperative per abdominal.

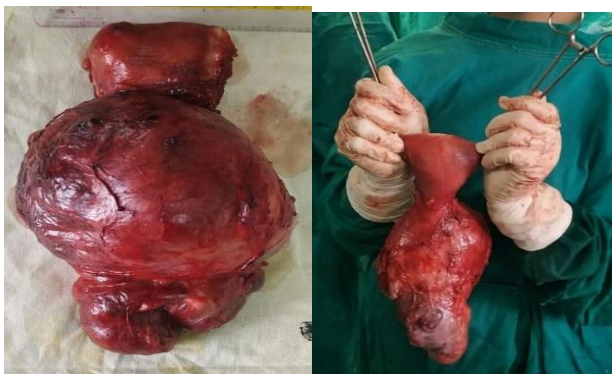


Figure 2: Large cervical fibroid with uterus.

### Case 2

A 51-year-old female, P4L4 presented with chief complaint of pain abdomen with dyspareunia. Per

abdomen: uterus was corresponding to 16 weeks of gestation. Per speculum: cervix not visualized with cervix being pulled up. Bulging mass seen in upper vagina. Per vagina: a 6x7 cm mass felt arising from the cervix, movement of the mass transmitted to uterus. Uterus deviated to right side. Ultrasonography: an 8x8x6 cm lateral wall cervical fibroid present, deviating the uterus to the right side with left sided hydroureter. Management: non-descent vaginal hysterectomy with B/L salpingectomy. Histopathological report: cervical leiomyoma.

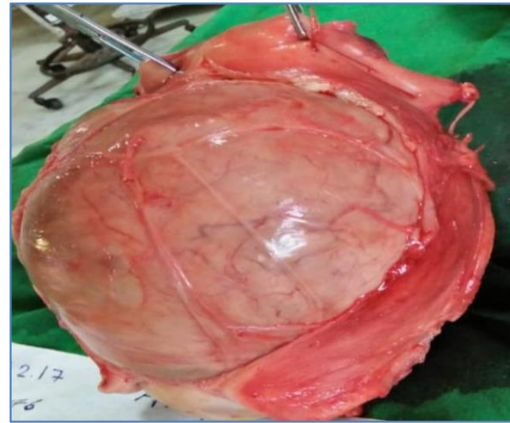


Figure 3: Specimen of uterus with cervical fibroid.

### Case 3

A 45-year-old female, P2L2A1 presented with pain abdomen. Per abdomen: uterus just palpable. Per speculum: cervix and vagina healthy. Per vagina: uterus corresponding to 12-14 weeks of gestation with bilateral fornices free. Ultrasound: cervical fibroid of 3.9 x 4 cm present on the posterior lip of the cervix. Management: total abdominal hysterectomy with bilateral salpingectomy. Histopathology report: proliferative endometrium with cervical leiomyoma.

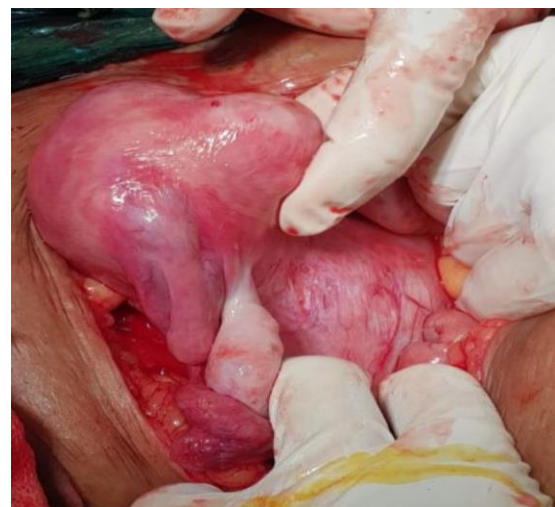
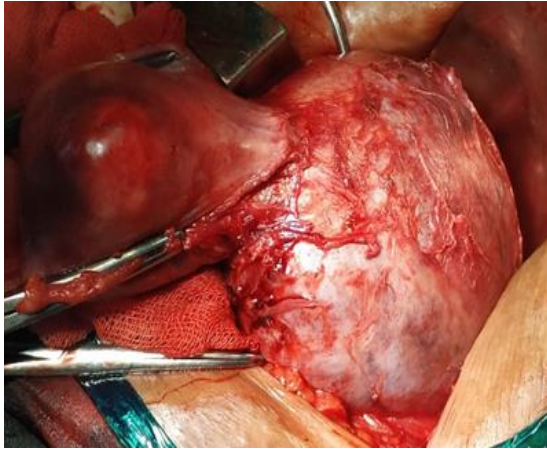


Figure 4: Intraoperative picture of cervical fibroid.

#### Case 4

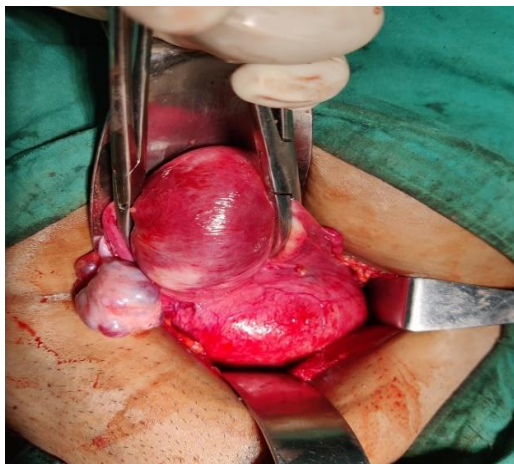
A 43-year-old female, P4L4A2 presented with menorrhagia. Per abdomen: uterus just palpable. Per speculum: cervical erosions present. Per vagina: 7x5 cm mass felt arising from the cervix with posterior wall fullness present. USG: A 8 x 6 x 5 cm fibroid present on the cervix. Management: total abdominal hysterectomy with bilateral salpingectomy. Histopathology: cervical leiomyoma with squamous metaplasia.



**Figure 5: Intraoperative picture of uterus with large cervical fibroid.**

#### Case 5

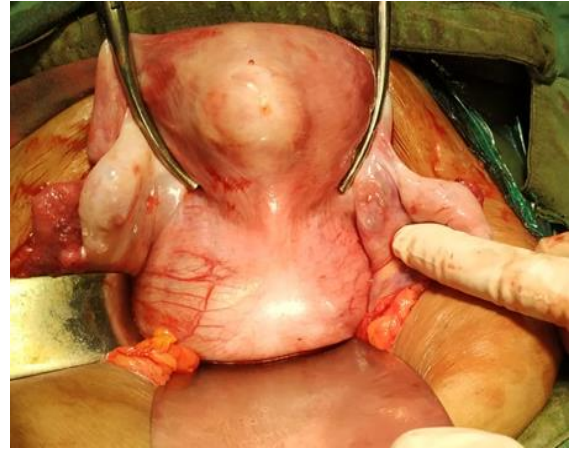
A 44-year-old female, P2L2 presented with pain abdomen. Per-abdomen: uterus corresponding to 16 weeks. Obesity present. Per-speculum: cervix high up, with minimal white discharge present. Per-vagina: uterus corresponding to 16-18 weeks of gestation, firm consistency, non-tender. Ultrasound: cervical fibroid of 10 x 7.5 cm. Management: total abdominal hysterectomy with bilateral salpingectomy. Histopathological report: cervical leiomyoma with chronic non-specific cervicitis.



**Figure 6: Intraoperative picture of cervical fibroid.**

#### Case 6

A 41-year-old female, P2L2 presented with menorrhagia. Per abdomen: soft. Per speculum: growth arising from the endocervical region with necrotic area. Per vagina: a growth of 3 x 4 cm arising from the anterior lip of the cervix. Ultrasound: a cervical fibroid of 4.6 x 3.7 x 2 cm. Management: total abdominal hysterectomy with B/L salpingectomy. Histopathology report: cervical leiomyoma with chronic endocervicitis.



**Figure 7: Intraoperative picture of cervical fibroid.**

#### Results

In our study of 6 cases, we observed that the most common age of presentation of cervical fibroids is between 40 to 50 years. Women of second parity were most commonly involved. The most common presenting symptoms was pain in the abdomen followed by menorrhagia. All patients underwent hysterectomy- most of them by abdominal route and one case, i.e., 16% underwent non-descent vaginal hysterectomy, with bilateral salpingectomy. In required cases, cystoscopy and Double J stenting can be done to reduce the risks of ureteric injury during surgery. However, DJ stenting was not performed for either of our cases as DJ stenting causes abrasions of the ureteric mucosa and increases the chances of urinary tract infections.<sup>3</sup> Another disadvantage is that the flexibility of the ureters is lost due to DJ stenting. Ureters are always kept under careful vision at all times of the surgery. Usually, in experienced hands, we face no problems of ureteric injury. Cautious monitoring for signs of ureteric injury is done. The mean post-operative period of stay was 9.6 days. Amongst 6 cases, only one patient required blood transfusion. The largest cervical fibroid operated was 20x12x10 cm with uterus corresponding to 22 weeks of gestation.

#### DISCUSSION

Cervical fibroid is regularly encountered, frequently associated with other uterine fibroids. They usually present with abnormal uterine bleeding (AUB), dyspareunia, post-

coital bleeding, chronic vaginal discharge or chronic pelvic or abdominal pain.<sup>4</sup> They may also present with disturbances in the bladder habits- such as increased frequency, burning micturition or retention, Prolapsed Leiomyomas can cause ulceration, bleeding and infection. They may even bleed on touch- mimicking cervical malignancies.<sup>5</sup> However, fibroids are firm in consistency and is preferable to be confirmed by biopsy. Pre-operative evaluation of the hemodynamics of patient, PAP smear, nature of fibroid and evaluation of the urinary tract is essential.<sup>6</sup> To avoid injury to the ureters during surgery, it will be the surgeon's choice to do pre-operative cystoscopy and/or DJ stenting. Intra- operatively, careful watch should be on the ureters and all injuries are to be avoided. Post-operative evaluation of the urinary tract is compulsory- the integrity of the bladder and ureters must be confirmed before abdominal closure. There is no reason to keep the urinary Foleys catheter for prolonged duration, unless injury to the bladder or ureters are suspected. In cases wherein a DJ stent was put, the stent can be removed soon after surgery after confirming the integrity of the urinary tract.<sup>7-11</sup>

## CONCLUSION

Prior to hysterectomy, enucleating the myoma gives a better access and decreases the risk of ureteric injury, thus reducing the risk of complications. Cervical myomectomy is indicated if there is a need to preserve the uterus. Operating on cervical fibroids is indeed surgically challenging owing to the close proximity of the lesion to the ureters, distortion of the pelvic anatomy and relative restriction of field of surgery. Enucleating the fibroid is a key surgical technique to prevent any ureteric injury. It is important to be meticulous in the dissection of ureter and bladder and to keep the ureter under direct vision at all times of the surgery. Since the bladder is mobilized well below the cervix, the Ashok Anand Stitch can also be tried in order to reduce the lower segment blood loss, showing very good results. It is necessary to be extremely cautious during the surgery and is preferable to be operated by senior surgeons with utmost wariness. Only with experience and fine surgical skills can good patient outcome be achieved. Even with the advent of various alternative management options, surgery remains the mainstay of treatment and is still a surgeon's nightmare.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: Not required*

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**Cite this article as:** Pushpa C, Anand AR, Jain AR. Cervical leiomyomas: a surgeon's challenge. *Int J Reprod Contracept Obstet Gynecol* 2023;12:1449-52.