International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Devi CD et al. Int J Reprod Contracept Obstet Gynecol. 2026 Aug;15(8):3245-3247
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20262565

Case Report

Lipoleiomyoma of uterine cervix in a young woman: a rare case report

C. Durga Devi, Roopa, T. Preetha, Sridevibala L.*

Department of Obstetrics and Gynaecology, Government Theni Medical college, Theni, Chennai, Tamil Nadu, India

Received: 09 April 2026
Revised: 21 June 2026
Accepted: 30 June 2026

***Correspondence:**
Dr. Sridevibala L.,
E-mail: isridevibala@gmail.com

ABSTRACT

Lipoleiomyoma is a rare benign variant of leiomyoma characterized by the presence of mature adipose tissue mixed with smooth muscle cell. It most commonly occurs in the uterine corpus and is typically seen in postmenopausal women, while involvement of the cervix is extremely rare. We presented a case of a 29-year-old woman who presented with lower abdominal discomfort and a pelvic mass. On clinical examination, a bulging mass was noted in the anterior vaginal wall with displacement of the cervical os. Ultrasonography revealed a large subserosal fibroid arising from the anterior cervical wall measuring approximately 8.5×8.4 cm causing mass effect. MRI pelvis suggested anterior cervical leiomyoma with cystic degeneration. The patient subsequently underwent total abdominal hysterectomy with cervical mass removal. Intraoperatively, a well-defined cervical mass was identified. Histopathological examination showed interlacing bundles of smooth muscle cells admixed with mature adipocytes, confirming cervical lipoleiomyoma. This case highlights the rarity of cervical lipoleiomyoma and the importance of histopathology for definitive diagnosis.

Keywords: Lipoleiomyoma, Rare benign tumor, Adipose tissue, Cervical lipoleiomyoma

INTRODUCTION

Lipoleiomyoma is a rare benign variant of uterine leiomyoma characterized by the presence of mature adipose tissue admixed with smooth muscle cells.[1] The exact pathogenesis remains unclear, though theories include fatty degeneration of smooth muscle cells or metaplasia of mesenchymal cells.[4] Lipoleiomyomas are typically seen in perimenopausal and postmenopausal women and are commonly located in the uterine corpus.[2] Occurrence in the uterine cervix is extremely rare, with only a few cases reported.[2,4] Presentation in young reproductive-age women is even rarer, making such cases important to report for better clinical understanding.

We presented a case of cervical lipoleiomyoma in a 29-year-old woman, which was clinically and radiologically suspected as a cervical fibroid and managed surgically.

CASE REPORT

A 29-year-old female with parity score P1L1, presented with complaints of pelvic discomfort and a palpable pelvic mass. She had a H/O previous lower segment caesarean section done for major cephalopelvic disproportion. Her menstrual history was regular cycle. There was no significant past or family history of similar illness.

On general examination patient was thin built, with a height of 152 cm and weight of 42 kg corresponding to BMI of 18 kg/m^2.

On per abdominal examination, the abdomen was soft with a previous suprapubic transverse scar present. On per vaginal examination, a large bulging mass measuring approximately 12×10 cm was noted arising from anterior vaginal wall displacing the cervical os, cervix could not be made out separately.

Ultrasonography of the abdomen and pelvis revealed a subserosal fibroid arising from the anterior cervical wall measuring approximately 8.5×8.4 cm causing mass effect. Further evaluation with MRI pelvis showed a large anterior cervical leiomyoma with cystic degeneration measuring about 7.4×8.9×8.1 cm. Considering the large size and symptomatic nature of the mass, the patient was planned for surgical management.

Management and histopathology

The patient underwent total abdominal hysterectomy with removal of the cervical mass. Intraoperatively, a large mass arising from the anterior cervical wall was noted. The surgical specimen was sent for histopathological examination.

Microscopic examination revealed interlacing bundles of smooth muscle cells admixed with mature adipose tissue, consistent with the diagnosis of lipoleiomyoma.1,4 No evidence of malignancy was noted.

The postoperative period was uneventful, and the patient recovered well.

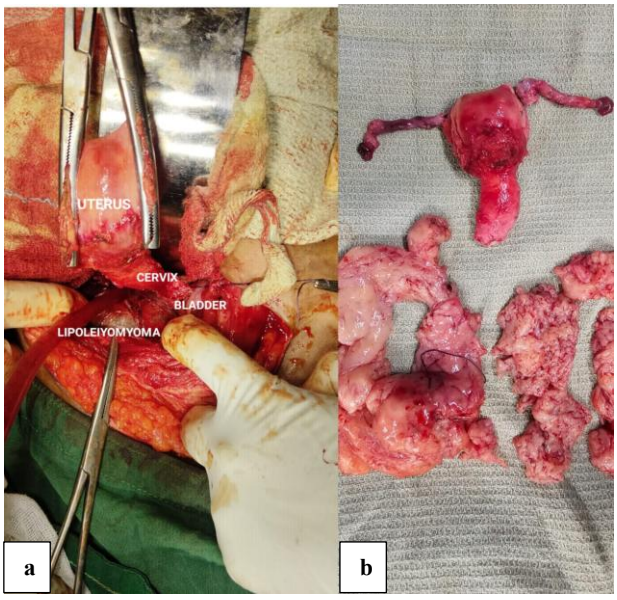

Figure 1: (a) Intraoperative finding; (b) specimen.

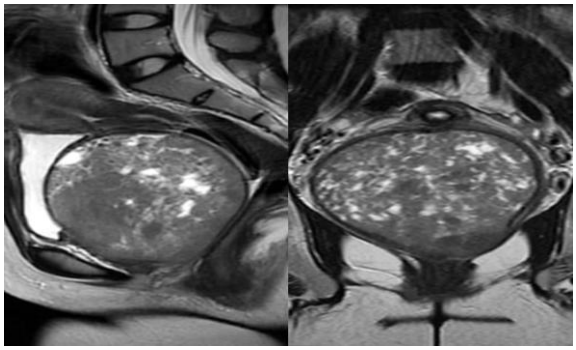

Figure 2: MRI of pelvis.

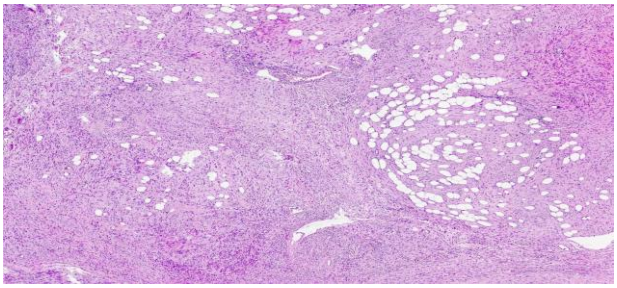

Figure 3: HPE, 10X-Cervical lipoleiomyoma.

DISCUSSION

Lipoleiomyoma is a rare benign uterine tumor with an incidence reported to be 0.03-0.2% of uterine tumors.[4] These tumors are most commonly seen in postmenopausal women and are frequently associated with metabolic disorders such as obesity, diabetes, hypothyroidism and hyperlipidemia.[4]

Clinically, lipoleiomyomas are often asymptomatic and are usually detected incidentally during imaging or surgery. When symptomatic, patients may present with pelvic pain, abnormal uterine bleeding, pelvic mass, or pressure symptoms depending on the size and location of the tumor. They may produce mass effect on adjacent organs such as the bladder or rectum, leading to urinary or bowel symptoms.[3]

Cervical lipoleiomyomas are extremely rare, and occurrence in young women is even more unusual.[2,4] Preoperative diagnosis can be challenging because imaging findings may mimic degenerating leiomyoma or other pelvic masses.

MRI may help in diagnosis by demonstrating fat components within the tumor.[4]

Surgical management is usually performed in symptomatic or large tumors, and the definitive diagnosis is established through histopathological examination, which shows interlacing bundles of smooth muscle cells interspersed with mature adipose tissue without cellular atypia or malignancy.[1,4]

Important differential diagnoses include lipoma, liposarcoma, mature cystic teratoma, Gartner's cyst, canal of Nuck cyst and degenerated leiomyoma. However, cystic lesions like Gartner's duct cyst and canal of Nuck cyst are typically soft and fluid-filled, unlike the firm mass seen in our case.

Management depends on the patient's age, symptoms, tumor size, and reproductive wishes. As these tumors are benign, conservative management may be considered in asymptomatic patients. However, surgical removal is indicated in symptomatic cases or when malignancy cannot be ruled out. In women who have completed

childbearing, hysterectomy remains the definitive treatment.

Our case is noteworthy because lipoleiomyoma arising from the cervix in a young reproductive-age woman is extremely rare, and the large tumor produced significant anatomical distortion with displacement of the bladder, necessitating surgical management.

CONCLUSION

Cervical lipoleiomyoma in a young reproductive-age woman is extremely rare, and histopathological evaluation remains the gold standard for definitive diagnosis.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Devi CD, Roopa, Preetha T, Sridevibala L. Lipoleiomyoma of uterine cervix in a young woman: a rare case report. Int J Reprod Contracept Obstet Gynecol 2026;15:3245-7.