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Case Report

A rare case scenario of transection of cervix during laparoscopic adenomyomectomy for a cervical fibroid: a nightmare of gynecologist

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ABSTRACT

We are reporting a case of complete cervical transection during adenomyomectomy, a disconnection between uterus and cervix which is a rare complication of myomectomy procedure. A 32-year-old presented with secondary subfertility with heavy menstrual bleeding. Ultrasound showed a large cervical adenomyoma of posterior lip for which adenomyomectomy was performed. During enucleation of the myoma, cervical transection encountered. Successful reconstruction of the uterus to cervix done following which MRI performed six months later showed complete reanastomosis of uterus to cervix followed by regular establishment of periodic menstruation.

Keywords: Cervix, Transection, Myomectomy

INTRODUCTION

Uterine fibroids are the most common benign tumors with a prevalence of 20-40% in premenopausal age group.[1] Uterine fibroids also called as leiomyomas are non-cancerous growths that usually develop during childbearing years. The pathophysiology of uterine fibroids is unclear. According to research, fibroid development begins with a single uterine smooth muscle cell and followed by deviations from normal signaling pathways of cellular division.[2] Fibroids are estrogen dependent tumors. Usual symptoms are abnormal uterine bleeding, pelvic pain, back pain. They are classified into subserosal, intramural and submucosal fibroids. Due to abnormal uterine bleeding, most of the patients undergo myomectomy or hysterectomy according to the age.

Abdominal myomectomy is a common gynecological procedure done on women of childbearing age group and for patients with infertility. It is associated with risks of haemorrhage, injury to uterus and hysterectomy will always be preoperatively counselled with the patient. Complete transection of the uterus during myomectomy is a rare case phenomenon due to difficult myomectomy and multiple fibroids.

CASE REPORT

A 32-year-old, presented to the gynaecological department with complaints of heavy menstrual bleeding and secondary infertility for about five years. Patient was anxious to conceive for the past 5 years. Patient is a known case of hypothyroidism on medications and with no past surgical history. On bimanual examination, cervix felt downwards, uterus anteverted 16-18 weeks size, irregularly enlarged with a fullness in the posterior fornix and restricted mobility due to the size of the mass.

She underwent investigations for secondary subfertility. Serum FSH/LH, thyroid levels, prolactin and semen analysis were within normal limits. A pelvic ultrasound showed uterus of 12.2×7.6 cm with large cervical fibroid of posterior lip with myoma of size 8.6×3.9 cm. Fibroid mapping done by MRI pelvis showed fibroid uterus which was a posterior wall intramural fibroid extending into the subserosal aspect (8×7.7×6.5 cm) with areas of

degeneration. Hysterosalphingogram showed bilateral cornual block, due to large myoma indenting the cavity with features of uterine synechia.

In view of the above findings, patient was planned for laparoscopic myomectomy. Initially hysteroscopy was performed by introduction of 30-degree hysterscope and NS as a distending medium. Findings-endocervical canal visualized normally, endometrial cavity showed posterior wall fibroid indenting the cavity on the right side. Bilateral ostia visualized with difficulty.

Laparoscopic adenomyomectomy was done and intraoperatively, Uterus was enlarged to 16–18-week size, Posterior wall of lower uterus and cervix bulged out due to fibroid. Bilateral tubes and ovaries normal. Adenomyomectomy proceeded by making a horizontal incision into the myoma in the posterior uterine wall. Difficulty encountered in reaching the myoma capsule. The adenomyoma was hitching the cervical canal anteriorly and posteriorly encroaching the surface of the uterus with involvement upto the internal OS. Myoma densely adherent to the uterine serosa. Fibroid calcification seen. Hence laproscopic adenomyomectomy was converted to open adenomyomectomy.

After opening the layers of the abdomen, procedure continued to deliver the myoma by piecemeal method. As the posterior lip of cervix drawn up into the myoma, iatrogenic cervical transection was encountered during the attempts to remove the myoma.

Reconstructive sutures taken by connecting the posterior uterine wall and its lower end to the upper end of the vagina. Similarly sutures taken anteriorly to restore continuing of the endometrial cavity. Methylene blue dye was injected at the end of the procedure, showed no breach in cavity and patent bilateral fallopian tubes. Good anatomical restoration and haemostasis was achieved at the end of the procedure. She made a good post operative recovery.

She was followed up 3 months post procedure. She denied any abdominal pain and started to have infrequent light periods. Ultrasound scan showed presence of a good connection between the uterine body and the cervix. Vaginal examination revealed a normal looking OS.

Six months post procedure, patient started to have monthly regular cycles.

After one year of the procedure, patient underwent diagnostic hysteroscopy and findings showed, a well-formed endocervical canal, patent cervix, normal uterine cavity with bilateral ostia visualized. Diagnostic laparoscopy done which showed a well maintained tubo-ovarian relation in both sides and with chromopertubation, bilateral spillage of methylene blue seen from both the tubes. She is currently contemplating a pregnancy in the future and would benefit from seeing an expert to discuss regarding the risks associated with it such as preterm birth, cervical incompetency, need for abdominal en-cerclage.

Figure 1: Laprascopic image of uterus with adenomyoma.

Figure 2: Excision of the myoma.

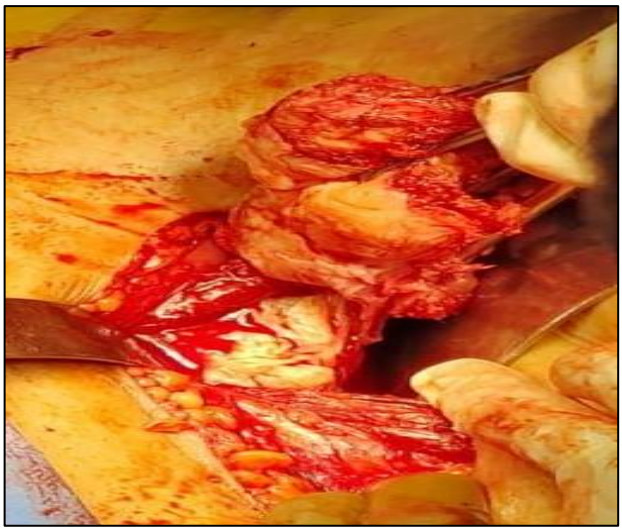

Figure 3: transection of cervix from uterus.

Figure 4: Post surgery ultrasound image of reconstructed uterus with cervix.

Figure 5: Post surgery image of well-formed cervix.

DISCUSSION

Iatrogenic transection of uterus from cervix is a completely rare complication and we have worldwide very few cases pertaining to the same. There are other rare complications of myomectomy such as uteroperitoneal fistula and uterine artery pseudoaneurysm have been reported.[3] A few studies denoted complete transection of uterine corpus from the cervix due to crushing trauma to the pelvis due to accident.[4,5] We have very little information related to management of this condition and in need of individualized planning. According to a study, Anastomotic techniques for the uterine body and vagina in abdominal radical trachelectomy can be applied to conjugate the uterine cervix and body.[6] Radical trachelectomy is mainly used in treatment of cervical cancer, and for preservation of fertility in patients with benign disease. In this study we successfully anastomosed the separated uterine cervix and body using this technique, which facilitated the onset of periodic menstruation, as well as improving monthly abdominal pain.

According to a study, in order to prevent such unwanted complication, the following three points should be noted when performing myomectomy. First, the exact relation of myoma with the endometrium should be identified to decide the appropriate site of incision in the uterine wall, especially with a large type 2-5 myoma. MRI or intraoperative transabdominal ultrasound with a trans-cervically placed sound in the uterine cavity can help to understand the relation between the myoma and endometrium. Second, all myomas are encapsulated by a pseudo-capsule, and careful attention is needed not resect any normal uterine tissue beyond this capsule.[3] Third, keeping 8 Fr Foley catheter in the uterine cavity through the operation is helpful to confirm in case of accidental entry into the cervical canal or uterine cavity.[8] Hysterectomy was the management for these cases before because of the complication of cervical recanalization and the difficulty of having normal viable pregnancy. Improved surgical techniques and preservation of the uterus for future fertility are considered to be the first line of treatment at present.

Transection of cervix from the uterus mimics uterine transplantation. Infertility due to absence of a uterus or due to congenitally malformed uterus with normal functioning ovaries, has remained an obstacle to pregnancy in communities where surrogacy is not approved by religious or ethical authorities. In uterine transplantation, the main difficulty was vascular anastomosis between uterine vessels of the donor and recipient. Unlike other organs, where large vessels are the source of blood supply, in uterus the blood supply and drainage occur through a net of tiny vessels. In our case, after transection of cervix, sutures were taken from anterior and posterior surface of the cervix to the lower end of the uterus. Restoration of the anatomy was checked with methylene blue and there was no breach of cavity, therefore procedure was successful.

CONCLUSION

Reconstructive surgery has led to good anatomical restoration and cyclical menstruation. Patient has significant decrease in heavy menstrual bleeding. Patient has a high risk of developing placenta accreta, cervical ectopic, cervical incompetence, preterm birth and difficult caesarean delivery. Further follow up of the patient is required to know whether the patient can conceive spontaneously or will require artificial reproductive techniques.

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