

CASE REPORT

Iatrogenic Endometriosis and Intrauterine Adhesions after Myomectomy

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ABSTRACT

Aims: To report a case of iatrogenic endometriosis as a result of improper closure of endometrial cavity during myomectomy.

Case report: A 30-year-old para 1 has been self-referred to our institution for medical care. A fibroid protruding the endometrial canal was removed 8 months prior to this hospital admission. In less than a month after initial myomectomy, she began experiencing severe pelvic pain more accentuated during menstruation. The pain became progressively worse. The magnetic resonance imaging results are suggestive of ovarian endometrioma. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy. Cut surface of uterine cavity shows obliteration of endometrial canal with hourglass constriction.

Conclusion: Closure of endometrium during myomectomy should be carefully done; keeping an account on patency of endometrial canal is essential to prevent iatrogenic endometriosis.

Keywords: Endometriosis, Intrauterine adhesions, Myomectomy, Retrograde menstruation.

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INTRODUCTION

Improper closure of endometrial cavity during myomectomy leads to retrograde menstruation with the development of iatrogenic endometriosis. A 30-year-old para 1 has been self-referred for medical care. A fibroid protruding from the endometrial canal was removed 8 months prior to this hospital admission. In less than a month, after initial myomectomy, she began experiencing severe pelvic pain

which was accentuated during menstruation. The pain became progressively worse. The magnetic resonance imaging (MRI) results are suggestive of ovarian endometrioma. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy. Cut surface of uterine cavity showed obliteration of endometrial canal with hourglass constriction. Closure of endometrium during myomectomy should be carefully done; keeping an account on patency of endometrial canal is essential to prevent iatrogenic endometriosis.

Uterine myomas are the most commonly encountered benign tumor in gynecological practice.¹ Women in their 30s and 40s are usually affected with these tumors.² It usually presents with heavy menstrual blood loss, pressure symptoms, and infertility.³ It has been observed that more than half of the women are unable to conceive due to fibroids.² Myomectomy is a procedure where enucleation of fibroids with reconstruction of the uterus is done to preserve fertility. However, it also carries the risk of removal of the uterus due to hemorrhage. In addition, this procedure may be associated with other complications like infections, hematoma formation, myomectomy scar dehiscence with or without pregnancy.⁴ Further, despite a successful surgery, adhesions formation may occur. Common sites of these adhesions are intraperitoneal, para ovarian, and peritubal adhesions, which may lead to tubal blockage. The rare and neglected complication of myomectomy is the development of intrauterine adhesions.⁵

This case highlights the importance of meticulous closure of endometrium during myomectomy to avoid complications in future.

CASE REPORT

A 30-year-old married woman, para 1 self-referred to our institution with complaints of amenorrhea and cyclical pelvic pain. She had myomectomy due to intramural fibroid penetrating the endometrial canal 8 months before presentation.

The operative record of myomectomy was reviewed. The clinical indication for myomectomy was well justified as there was history of abnormal uterine bleeding, subfertility, and anemia along with demonstration of anterior wall fibroid of 8×6 cm in intramural region of the uterus.

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She underwent open myomectomy. During enucleation, endometrial cavity was opened and repaired. Thread type, size, and type of sutures were not mentioned in the notes. She was discharged on 4th postoperative day.

One month later, she developed amenorrhea, which was associated with severe cyclic abdominal pain. Her doctor prescribed her some injectable analgesics but the pain did not decrease significantly. This excruciating pain occurred monthly and was associated with pinkish vaginal discharge. Her gynecologist prescribed some contraceptive pills; however, her symptoms were not relieved.

On genital examination cervix was normal looking, while bimanual examination showed normal-sized uterus with limited mobility and left fornix was completely obliterated. There was no definite mass on palpation. She was advised for MRI, which showed an endometrioma 5.2×4.7 cm. In addition, CA 125 was repeated, that showed an increasing trend from 21.20 to 95.49 IU/mL in 4 months time period.

MANAGEMENT AND OUTCOME

The patient was advised for hystero-salpingiography in suspicion of obliteration of uterine cavity, but the couple refused and insisted to remove the uterus. Due to suspicion of adhesions ureteric stents were placed. Abdomen was opened through midline incision. There was mild hemorrhagic peritoneal fluid and a left ovarian cyst obscured inside the adhesions. The pouch of Douglas was completely obliterated due to adhesions. During dissection, the cyst ruptured and chocolate-colored, thick fluid spilled out, since the left ureter was adherent to the ovarian cyst, and an urologist was called to separate the ureter. Total abdominal hysterectomy with bilateral salpingo-oophorectomy was done. Left ureteric stent was kept for 6 weeks. Two intraperitoneal drains were placed. Abdomen was closed in layers.

Cut surface of uterus (Fig. 1) shows hourglass constriction with division of uterine cavity. The tiny distal cavity was in continuation with exterior while proximal larger cavity was blind distally with retrograde menstruation intraperitoneally.

Histopathology confirmed the diagnosis of extensive endometriosis. She received cefazolin and metronidazole along with Paracetamol and diclofenac sodium pessary for 7 days. Her postoperative recovery was smooth and was discharged home on the 4th postoperative day. One week later her stitches were removed. After 2 days, she complained burning micturition, her urine culture shows *E. coli*, which was treated with oral amoxicillin and clavulanate. Her left ureteric stent was removed under local anesthesia 6 weeks after operation.

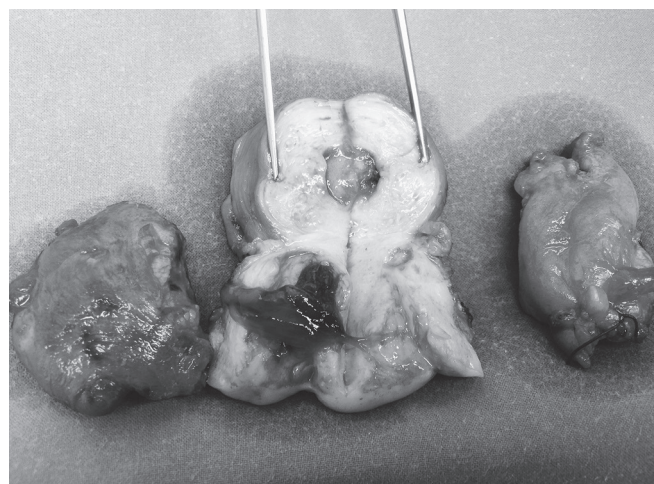


Fig. 1: Cut surface of uterus shows hourglass constriction

She had three postoperative visits in the clinic during last 8 months. She has remained asymptomatic. We advised her to do regular exercises and take calcium supplement.

DISCUSSION

It has been documented that during myomectomy, if there is a breach in endometrium, it needs to be closed cautiously with 3-0 absorbable polyglycolic acid sutures.⁴ This case elucidated that breach in the endometrium was identified, but probably closed inappropriately that led to development of intrauterine adhesions. According to American Fertility Society classification of intrauterine adhesions, this case was classified as severe intrauterine adhesions with involvement of more than two-third of uterine cavity with dense adhesion and amenorrhea.⁶ Although in the literature, intrauterine adhesion is a rare complication, a study conducted in London reported that 50% of women, 3 months post myomectomy, had intrauterine adhesions but were asymptomatic. However, none of them had severe adhesions, which was in contrast to our case, the most strange thing is that these all women were asymptomatic.⁵

The adhesions lead to retrograde menstruation. Menstrual blood contains viable cells, which are transported into the peritoneal cavity and may implant onto the surface of exposed tissues, predominantly the peritoneum. This increases further in cases with short menstrual cycles and outflow obstruction with mullerian abnormalities.⁷ This retrograde menstruation may lead to iatrogenic endometriosis. There were few reported cases, which postulated that the use of electric morcellator during myomectomy may disseminate endometrial tissues into peritoneal cavity leading to development of iatrogenic endometriosis.⁸ In this case, severe intrauterine adhesions obliterated the uterine cavity that presented with amenorrhea and severe cyclic lower abdominal pain with progression of iatrogenic endometriosis.

Intrauterine adhesions can be prevented by recognizing the endometrium by placing the Spackman cannula inside the uterus or instillation of methylene blue dye pre or intraoperatively. Once identified, it should be precisely sutured with 3-0 absorbable polyglycolic acid materials.⁴ After suturing, Foleys catheter balloon should be kept inflated with 30 mL of fluid inside the cavity for 3 to 4 days to further reduce the formation of intrauterine adhesions.⁹

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