Iatrogenic Uterine Corpus Separation from the Cervix following Myomectomy

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Abstract
Introduction: No case of uterine corpus separation from the cervix following myomectomy has been reported. This report introduces a case of possibility and prevention of iatrogenic blind-ending uterine corpus occurring after Myomectomy.

Presentation of case: A nulligravida presented with complaints of serious cyclic pelvic pain and secondary amenorrhea. She previously underwent open myomectomy and enucleation of ovarian endometriotic cyst 17 months before at another hospital. Ultrasonography and pelvic magnetic resonance imaging revealed a complete separation of the uterine corpus from the cervix. Laparoscopic finding showed severe adhesion between uterine fundus and bladder, left round ligament and sigmoid colon, and the space between uterine corpus and cervix had been replaced with soft tissue, showing complete loss of continuity between the uterine fundus and cervix.

Conclusion: This case shows that separation of the uterine corpus from the cervix resulting in iatrogenic blind uterine corpus can be occurred as a complication of myomectomy.

Keywords: Myomectomy; Secondary amenorrhea; Blind uterine corpus

Introduction
Various rare postoperative complications of myomectomy such as utero-peritoneal fistula and uterine artery pseudoaneurysm have been reported [1]. A few studies reported that complete separation of the uterine cervix can be occurred by crushing trauma of the pelvis by vehicle accident [2,3]. However, no case of uterine corpus separation from the cervix following myomectomy has been reported. Therefore, this report introduces a case of amenorrhea resulting from iatrogenic separation of the uterine corpus from the cervix following myomectomy.

Case Presentation
A 36-year-old woman, gravida 0, presented with complaints of serious cyclic pelvic pain and secondary amenorrhea. She had previously undergone open myomectomy and enucleation of ovarian endometriotic cyst at another hospital 17 months before. She had received six cycles of Gonadotrophin Releasing Hormone (GnRH) agonist treatment as an adjuvant treatment of endometriosis after myomectomy. At that time, she had no abnormal symptoms. However, no case of uterine corpus separation from the cervix following myomectomy has been reported. Therefore, this report introduces a case of amenorrhea resulting from iatrogenic separation of the uterine corpus from the cervix following myomectomy.

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specimen measured $6 \text{ cm} \times 4.4 \text{ cm} \times 4 \text{ cm}$ and weighed 50 g. Second, the pathological report from the previous hospital revealed presence of endometrial tissue in the specimen, which indicates disruption of the uterine cavity by excision of normal uterine wall including the endometrium. Third, in laparoscopic excision of the uterine corpus at our hospital, the weight of excised uterus was only 20 gm compared to the known normal weight of 45 gm - 60 gm. These three findings support the assumption that this unusual condition has occurred as a complication of previous myomectomy. This complication can be possibly explained in several aspects. Firstly, the surgeon of the initial myomectomy might have failed to identify the exact relation of myoma with the endometrium. Especially with a large type 2-5 myoma, the opposite uterine wall is likely to be flattened due to compression by the myoma and it may be hard to determine exactly from which wall the myoma is arising. Secondly, all myomas are encapsulated by a pseudocapsule and failure to identify this pseudocapsule could have also led to unnecessary removal of normal tissue [4]. Another possible explanation could be that the cervix could have been mistaken for a myoma since the consistency of the uterine cervix resembles that of a hard myoma when palpated with the finger tip. Lastly, hypertrophy of the uterus which is frequently noted in myomas is known to undergo remodeling after myomectomy, showing a gradual decrease in volume [5-7]. Thus the excessive resection of the uterine tissue including the myoma might not have appeared apparent at the time of myomectomy due to concomitant uterine hypertrophy. Considering the possibility of future decrease in uterine size following myomectomy by remodeling process, it is not necessary to obtain a normal sized uterus at the time of myomectomy. 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 transcervically placed sound in the uterine cavity can help to understand the relation between the myoma and endometrium. Second, all myomas are encapsulated by a pseudocapsule, and careful attention is needed not resect any normal uterine tissue beyond this capsule. 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.

**Conclusion**

This case shows that separation of the uterine corpus from the cervix resulting in iatrogenic blind uterine corpus can be occurred as a complication of myomectomy. Therefore, surgeons must be cautious when removing the myoma, trying not to excise the surrounding normal myometrium considering the two points suggested earlier in the discussion.

**References**


![Figure 1](image-url): Transvaginal ultrasonography and pelvic magnetic resonance sagittal T2W image showing a uterine corpus completely separated from the cervix. (A) The distal portion of the uterus seems to end blindly with the connection between the endometrial cavity and endocervical canal disrupted. (B) MRI shows complete separation of fluid-filled uterine corpus (white arrowhead) from the cervix (white empty arrowhead).