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Case Report

# Laparoscopic Uterine Anastomosis for Traumatic Separation of the Cervix From the Uterine Corpus Caused by Closed Pelvic Fracture: Case Report and Literature Review

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**ABSTRACT** Primary amenorrhea caused by separation of the cervix from the uterine body resulting from pelvic trauma is exceptionally rare. This case report describes the diagnosis and successful laparoscopic approximation of traumatic separation of the cervix from the uterine corpus. A 16-year-old girl who was involved in a car accident at age 2 years had primary amenorrhea and cyclic abdominal pain. A closed pelvic fracture was managed nonsurgically, with an uneventful recovery. Since age 13 years, the patient has been experiencing cyclic abdominal pain. Ultrasonography suggested a 5-cm left adnexal mass. Diagnostic laparoscopy revealed complete separation of the uterine corpus from the cervix, and an endometrioma in the left ovary. The uterine corpus was approximated to the cervix with circumferentially placed sutures under direct laparoscopic guidance. The endometrioma was resected concomitantly. Normal cyclic menstruation resumed 2 months postoperatively, without cyclic abdominal pain. This case report demonstrates successful laparoscopic approximation of traumatic separation of the uterine corpus from the cervix, manifested as primary amenorrhea. Journal of Minimally Invasive Gynecology (2013) 20, 244–247 © 2013 AAGL. All rights reserved.

*Keywords:* Genitourinary tract injury; Laparoscopy; Primary amenorrhea



## Case Report

A 16-year-old adolescent female was referred to our hospital for evaluation of primary amenorrhea. She reported lower abdominal pain every few months since the age of 13 years. An abnormally retroverted uterus and a 5-cm cyst of the left adnexa had been documented via pelvic ultrasound 2 months previously. She had sustained severe trauma in a motor vehicle accident at age 2 years. A plain radiograph documented a pelvic fracture without dislocation, which was managed nonsurgically. No apparent subsequent disability was noted. The history was otherwise unremarkable.

Physical examination revealed a virginal introitus with normal external genitalia and no indication of developmental, chromosomal, or endocrinologic disorder. On rectal examination, the uterus was felt to be of normal size and retroverted, yet seemed to move without connection to the cervix. A fixed, nontender, 5-cm mass was palpated in the left adnexa.

Ultrasonographic examination (Fig. 1) showed an abnormally retropositioned uterine corpus relative to a mobile cervix. A 5-cm left adnexal cyst was noted, along with a small amount of free peritoneal fluid.

Traumatic separation of the cervix from the uterine corpus was suspected, and laparoscopic exploration was performed (Fig. 2). The uterine isthmus was completely separated from the cervix, and the defect extended through the broad ligament to the pelvic wall on both sides. The lower segment of the uterine corpus was totally obliterated. An endometrioma was observed in the left ovary, which was adherent to the pelvic wall and left side of the uterus. The right adnexa appeared normal. The inferior portion of

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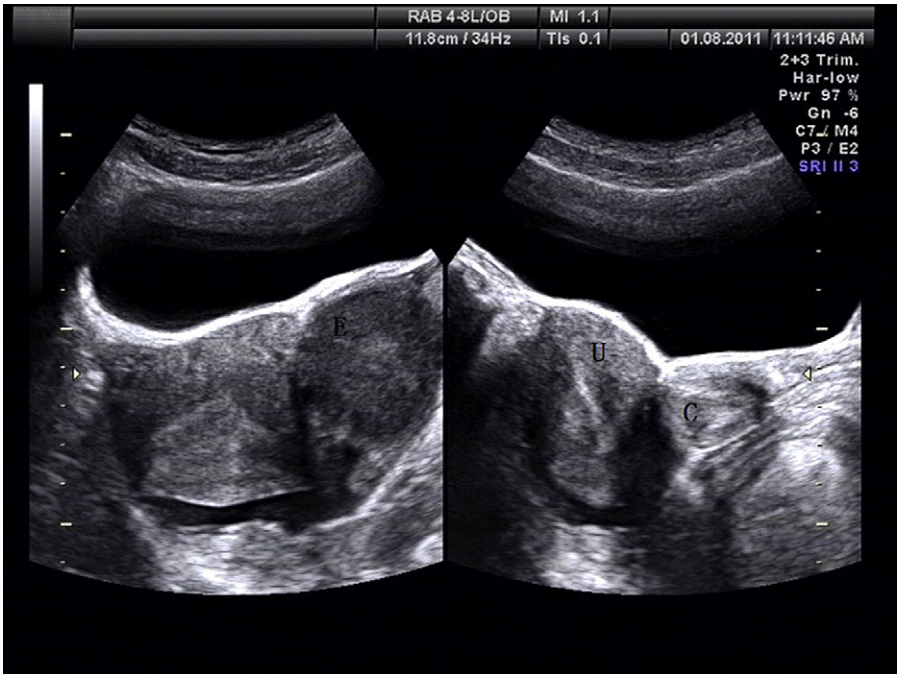
**Fig. 1**

Ultrasonographic examination showed an abnormally retropositioned uterine corpus (U) relative to a mobile cervix (C). A 5-cm left adnexal cyst (E) was noted, along with a small amount of free peritoneal fluid.




the uterine corpus was identified and dissected via shearing until the uterine cavity was reached, from which chocolate-like fluid was drained. A metal sound was inserted through the cervical canal into the peritoneal cavity as a guide for end-to-end anastomosis. The internal end of the cervix was also sheared to obtain a fresh unscarred surface. The cervix and corpus were then approximated circumferentially using 0-Vicryl interrupted suture (Ethicon, Inc., Somerville, NJ) (Figs. 3 and 4). A Foley catheter was inserted into the newly formed uterine outflow tract to prevent adhesion and stenosis of the cervical canal. The endometrial cyst of the left ovary was enucleated by means of our usual technique.

Total operative time was 134 minutes, and estimated blood loss was 50 mL. The postoperative course was uneventful. Histologic examination demonstrated that the ovarian cyst was an endometrioma. No malignant findings were

**Fig. 2**

Intraoperatively, a metal sound was introduced through the obliterated upper end of the cervix (C) into the peritoneal cavity. The obliterated lower segment of the uterus (U) and a huge broad ligament (L) window was also demonstrated.

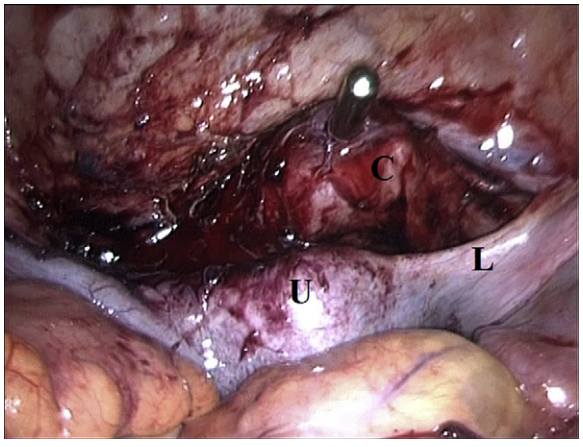



**Fig. 3**

Anastomosis of the uterine corpus (U) and the cervix (C).