

Brief Clinical Report

Laparoscopic Amputation of a Noncommunicating Rudimentary Horn After a Hysteroscopic Diagnosis: A Case Study

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Summary: This report describes the diagnosis and management of a noncommunicating rudimentary horn complicated by severe pelvic pain and associated endometriosis. This condition was diagnosed by simultaneous laparoscopic and hysteroscopic examinations. The hysteroscopic evaluation was significant in the diagnosis, as the noncommunicating horn was not recognized during a previous laparoscopy. The laparoscopic removal of the horn afforded complete long-term resolution of pain coupled with speedy postoperative recovery. **Key Words:** Operative laparoscopy—Unilateral metrectomy—Rudimentary horn.

Congenital uterine anomalies are associated with disruptions of müllerian fusion during the 8th week of intrauterine development, and their incidence ranges between 0.1% and 0.5% (1,2). The severity of these anomalies ranges from milder forms of arcuate uterus or uterine septum to complete uterine absence. It is estimated that 20–25% of patients with müllerian anomalies have reproductive irregularities, the most common being fetal wastage (1). In patients with a unicornuate uterus, the incidence of spontaneous abortion may approach 50% (1,2).

Abnormal paramesonephric development may result in a bicornuate uterus with unilateral hypoplastic horn. Despite the hypoplastic development, such cornu may contain a number of functional endometrial glands, frequently leading to hematometra or hematosalpinx and associated with severe dysmenorrhea. Amputation by laparotomy has been advocated in these cases (3).

This report describes a laparoscopic unilateral hysterectomy to amputate a severely dilated, obstructed rudimentary horn.

CASE REPORT

A 28-year-old woman, gravida 1, para 0 (miscarriage at age 18) was referred to our center for evaluation of a severe episode of pelvic pain. At age 23, she began experiencing abnormal uterine bleeding and recurring episodes of sharp right lower quadrant abdominal pain radiating to her back. She denied dyspareunia and dyschezia. The pain would begin just after menses and last until the following period, easing with the oncoming menses. After failed medical therapy, she underwent diagnostic laparoscopy and dilatation and curettage by her previous gynecologist to evaluate this condition. The procedure revealed pelvic endometriosis and bicornuate uterus with blocked right tube. A hysterosalpingogram following the surgery confirmed the presence of a bicornuate uterus; only the left cornua and tube were opacified. The right side was not seen. An intravenous pyelogram showed a mild medullary sponge kidney bilaterally.

Six weeks before her appointment at our center,

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the patient was placed on danazol (800 mg per day, Danocrine, Winthrop, New York, NY, U.S.A.) by the referring gynecologist for recurrent pelvic pain attributed to endometriosis. Upon presentation to our center to evaluate an acute episode of pelvic pain, pelvic exam revealed a tender uterine mass. There were no external genital abnormalities. Pelvic ultrasound exam showed an enlarged right uterine horn with an air-fluid level consistent with hematometra. During consultation, the patient was informed that the above findings possibly represented a noncommunicating rudimentary horn, which might need to be removed during simultaneous laparoscopy and hysteroscopy.

Under general endotracheal anesthesia, she underwent multipuncture operative videolaparoscopy and videohysteroscopy as previously described (4). Hysteroscopic evaluation revealed a patent left cornu, but there was no sign of the ostium on the right. Laparoscopy revealed a severely dilated right horn protruding 5 to 6 cm above the left side. The small bowel and omentum were firmly attached to the fundus of the right horn. Numerous thick fibrovascular adhesions anchored the dilated horn to both anterior and right pelvic side walls.

Upon meticulous adhesiolysis using CO₂ laser and hydrodissection (4), a uterine perforation was uncovered in the fundus of the distended right cornu. Lysis of omental adhesions allowed identification of multiple areas of endometriosis in the posterior cul-de-sac, on the right and left uterosacral ligaments, and on the right ovarian fossa. The right ureter was identified along its pelvic length by entering the retroperitoneal space. The endometriosis was treated using the CO₂ laser and hydrodissection.

We then performed a unilateral hysterectomy by coagulating and cutting the right round ligament and developing the bladder flap, followed by coagulating and cutting the right utero-ovarian and broad ligaments and uterine artery on the right. While the cosurgeon was guiding the surgeon with the hysteroscope, an incision was made between the rudimentary and the left horns and continued using sequential bipolar electrocoagulation and CO₂ laser to develop a distinct plane between the two horns. The dilated right horn was amputated at the level of the internal cervical os. It was cut in several parts and removed from the abdomen through the infraumbilical incision. Five 4-0 polydioxanone sutures (PDS, Ethicon, Somerville, NJ, U.S.A.) were used to close the muscularis and the serosa of the left uter-

ine horn. Chromopertubation showed left tubal patency and no damage to the left uterine wall. The patient was discharged on postoperative day 1 after an uncomplicated hospital course. At 26 month follow-up, she was pain-free and 24 weeks pregnant.

DISCUSSION

The management of this case illustrates the value of simultaneous laparoscopic and hysteroscopic evaluation of known uterine abnormalities. While hysterosalpingography showed an occluded right tube with an apparent bicornuate uterus, it did not reveal the presence of a rudimentary, noncommunicating horn. Had this patient undergone simultaneous hysteroscopy and diagnostic laparoscopy at age 23, the rudimentary noncommunicating right horn might have been diagnosed.

Another point of significance is this woman's immediate postoperative pain relief, despite her history of endometriosis. The high incidence of associated endometriosis has been documented in cases of obstructive müllerian anomalies (2). It is possible that removing the obstructed cornu reduces the incidence of endometriosis.

Management of a rudimentary horn may involve amputation of the aplastic cornu to avoid associated endometriosis and possible cornual pregnancy (3,5). Laparoscopic removal has been described previously, in which the cornu was not dilated by a large hematometra (6). Our case is significant because of severe dilatation of the rudimentary cornu as well as the long-term history of endometriosis. To minimize postoperative adhesion formation, hospital stay, and recovery, this condition can be managed with good results by using a combined laparoscopic and hysteroscopic approach.

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