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Case Report

Two cases of uterine and vaginal malformations

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Summary

Objective: To evaluate the efficacy of hysteroscopy and laparoscopy for oblique uterine septum and oblique vaginal septum. *Case Report:* There were one patient with oblique uterine septum and another patient with oblique vaginal septum. Case 1 was a 14-year-old female, who revealed a left unicornuate uterus and right non-communicating rudimentary horn with a cavity. Using a resectoscope with a needle electrode, the authors made a transverse incision on the bulging area of the septum at the level of the tubal ostium. Case 2 was a 14-year-old female with a double vagina, large fluid collection in the occluded right hemivagina, and absent of the right kidney. The authors performed a hysteroscopy, resection of the vaginal septum, and vaginoplasty. *Conclusion:* Intraoperative ultrasound monitoring can improve surgery safety, with the advantages of lesser amounts of trauma, a good therapeutic effect, fewer complications, less bleeding, quick recovery, and simultaneous protection of the hymen.

Key words: Oblique uterine septum; OVSS; Hysteroscopy.

Introduction

Oblique uterine septum is rare. It was first reported by Robert [1] in 1970. In the classification of the developmental abnormalities of the female reproductive system, the European Society of Human Reproduction and Embryology (ESHRE) and the European Society for Gynaecological Endoscopy (ESGE) classify it as a subtype of complete septate uterus [2]. The low part of the oblique uterine septum fuses with one side of the uterine wall occluding the uterine cavity on that side. Trapped menstrual blood causes hemi-hematometra with an accompanying symptoms of progressive dysmenorrhea or abdominal pain. It is often misdiagnosed as a unicornuate uterus by hysterosalpingography or hysteroscopic examination.Traditionally, the exact diagnosis is established by laparotomy [3, 4]. The authors present a case of oblique uterine septum diagnosed and successfully treated by hysteroscopy under ultrasound and laparoscopic guidance.

Oblique vaginal septum syndrome (OVSS) is a relatively rare genital tract deformity with an incidence of 0.1%~ 3.8% [5] that was first reported in 1922. It is characterized by the congenital malformations of double uteri, double cervices, double vaginae, and complete or incomplete vaginal atresia, and is often accompanied by urinary system malformation on the oblique septum side. In this case, combined hysteroscopy and ultrasound diagnosis and treatment can achieve satisfactory results. These conditions are now reported as follows.The study was approved by The First Affiliated Hospital of Chongqing Medical University Ethics Committee.

Cases Report

Case 1

Case 1 was a 14-year-old female, who presented on November 15, 2017 with increasing severe menstrual pain and reduced amount of menstrual blood of five months duration accompanied by nausea, vomiting, dizziness, headache, and back pain. Her menses were previously painless, regular every 30-35 days, and lasted 7-8 days. Menarche occurred at 13 years. A transvaginal ultrasound revealed left unicornuate uterus with a rudimentary horn. MRI with three-dimensional uterine reconstruction showing left unicornuate uterus and right non-communicating rudimentary horn with a cavity. A diagnostic hysteroscopy revealed a long, narrow uterine cavity with an inward protruding right uterine wall. Left tubal ostium was seen, but the right ostium was not identified.

On November 22, 2017, the patient underwent an operative hysteroscopy and the results of the previous hysteroscopy was confirmed (Figure 1). A concomitant transabdominal ultrasound demonstrated that the right hemiuterus was filled with fluid of 4×2 cm and bulging into the left uterine cavity, suggesting the presence of a uterine septum. Using a resectoscope with a needle electrode, the authors made a transverse incision on the bulging

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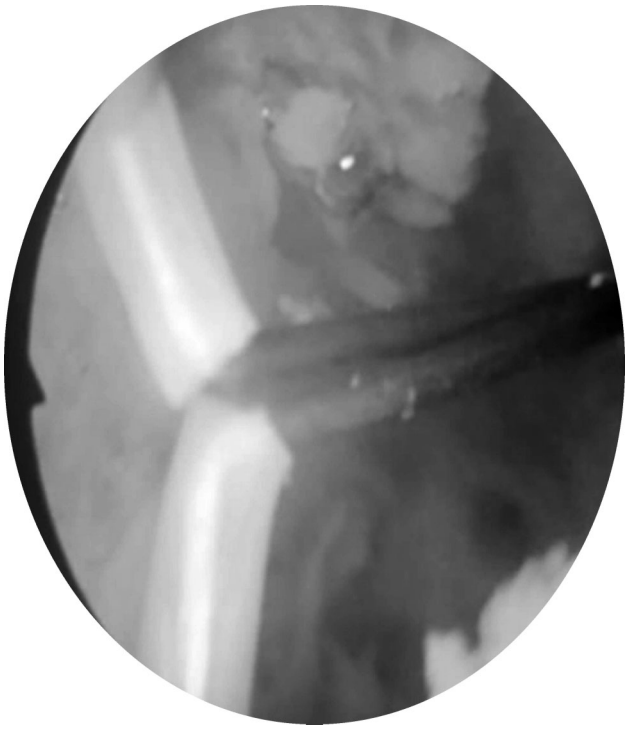

Figure 1. — Visible left fallopian tube ostium and invisible right oviduct ostium.

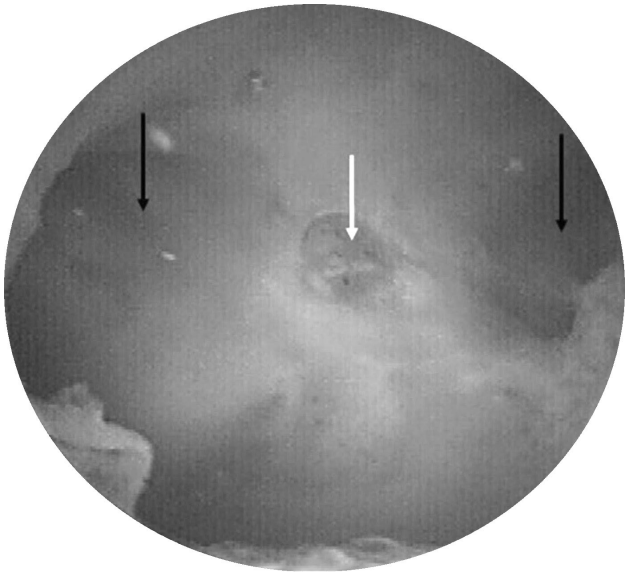

Figure 2. — The uterine cavity is restored (white arrow: remnant of the oblique septum, black arrows: tubal ostia).

area of the septum at the level of the tubal ostium. Old blood escaped from the opening.The lower edge of the oblique septum ended on the right wall of the uterus. At the completion of the procedure, three-cavity tube was inserted into the uterine cavity. The uterine cavity balloon was inflated with 8 ml of water, and the cervical balloon with 3 ml of water. A concomitant laparoscopy

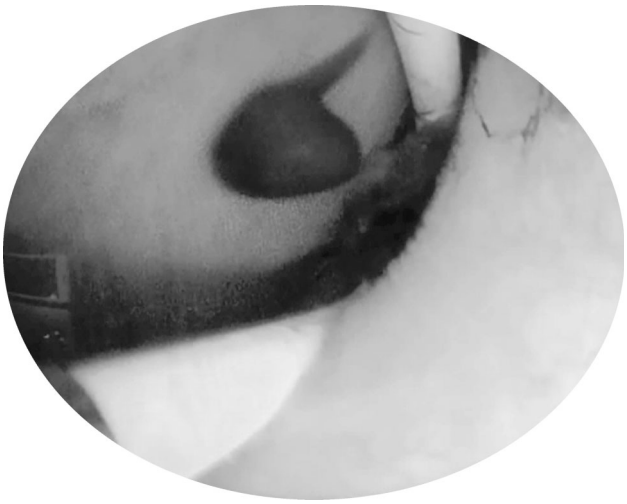

Figure 3. — Old blood escaping from a pinpoint opening to the bottom of the septum.

did not reveal endometriosis. After surgery, the patient was prescribed oral estradiol valerate 2 mg twice daily from day 1 to 21 of surgery, and medroxyprogesterone acetate orally from day 10 to 21. The drainage tube was removed on postoperative day 5. Repeat hysteroscopy two months after the initial surgery demonstrated normal uterine cavity (Figure 2). Menstruation resumed normally and the menstrual pain disappeared.

Case 2

Case 2 was a 14-year-old female with a history of irregular and prolonged menstrual bleeding of over seven days of four months duration. Menarche occurred at age 12 years. Menses were previously regular every 30 days and lasted three days with no pain. Ultrasound examination revealed two hemiuteri. A large cystic structure of 68×37×26-mm was seen in the right vaginal wall. Pelvic MRI with 3D reconstruction showed double uterus, double vagina with large fluid collection in the occluded right hemivagina and absent of the right kidney.

On July 26, 2017, the authors performed hysteroscopy, resection of the vaginal septum, and vaginoplasty. Hysteroscopy was first performed. It showed a normal left hemi-vagina. A vaginal septum was seen from medial to the cervix and extending downward until approximately 1 cm from the hymen. The right hemivagina bulged toward the left. Old blood escaped from a pinpoint opening on the top of the septum (Figure 3).

A needle electrode was then inserted into the opening and the authors incised the vaginal septum. More old blood escaped. The right cervix was now visible. Postoperatively, the menstrual pain disappeared and MRI was normal.

Discussion

Oblique uterine septum is rare. In this condition, the uterine cavity is divided into two cavities, and the septum leans to one side obstructing the hemi-uterus. The confined blood causes uterine pain, usually after menstruation [6, 7]. Excessive retrograde menstruation related to this hematometra predisposes to the occurrence

of endometriosis. As stated in the case report, the authors first used a laparoscope to examine the pelvic organs. Then, they excised the uterine septum by hysteroscopy until both tubal ostia were seen.

Oblique vaginal septum developed at 6th week fetal life, when the Müllerian duct fuses completely to develop into uterus, Fallopian tubes and upper vagina. Case 2 demonstrated the typical characteristics of oblique vaginal septum syndrome [8]. The appearance of the external genitalia was normal, making it difficult make a diagnosis. The uterus could be double, bicornuate, or septate [9] and is frequently combined with aplastic or dysplastic kidney, and is more common on the right side [10]. The present patient had combined bicornuate uterus and absence of the right kidney.

The traditional treatment is by vaginal approach using a cold knife to cut the septum. It is associated with excessive bleeding and disruption of the hymen in virgin females. Other methods are hemi-hysterectomy of the uterus on the obstructive site, and septum resection combined with vaginoscopy under ultrasound guidance. Hemi-hysterectomy is a more invasive procedure and reduces the probability of pregnancy. Hysteroscopy seems the most appropriate procedure especially in virgin females. As previously reported [11], the authors used a small calibre hysteroscope with a diameter of 4 mm under an ultrasound guidance.

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