Case Report

Hysteroscopic Management of Congenital External Cervical Os Stenosis Using a "No-Touch" Technique in an Adolescent

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A B S T R A C T

Background: Congenital external cervical os stenosis, one type of congenital cervical atresia, is particularly rare, and no case has been documented so far.
Case: A 12-year-old virginal patient with a history of mild vaginal bleeding for 14 days and lower abdominal pain for 10 days during her menarche was diagnosed with congenital external cervical os stenosis. Using a "no touch" technique, the diagnosis was further confirmed through a diagnostic hysteroscopy, and the narrow external cervical os was successfully corrected by resectoscopy, leaving the hymen intact. The patient was free of any symptoms postoperatively.
Results and Conclusion: We discuss the above-mentioned case and data already published in the literature. Congenital external cervical os stenosis in non-sexually active patients can be managed by diagnostic and operative hysteroscopy using a "no touch" technique while keeping the hymen intact.
Key Words: Congenital cervical stenosis, Hysteroscopy, Adolescents, Pelvic pain, Vaginal bleeding

Introduction

Congenital cervical os stenosis, in which there is an intact cervical body with a canal that has an obstructed os, is one type of congenital cervical atresia. Patients mainly present with primary amenorrhea or scanty menses accompanied by cyclic pelvic and/or lower abdominal pain. There is one published report of congenital internal cervical os stenosis.[1] To our knowledge, congenital external cervical os stenosis has not been documented so far. Here, we describe a case of a 12-year-old virginal patient with congenital external cervical os stenosis who was successfully diagnosed and treated with a "no touch" hysteroscopic technique[2] without disruption of the hymen. The present case report provides not only a rare case but also a minimally invasive means of managing a straightforward müllerian anomaly in non-sexually active adolescents.

Case

A 12-year-old non-sexually active girl presented with mild vaginal bleeding for 14 days and lower abdominal pain for 10 days. The pain had worsened in the 2 days before admission. Her menarche was 14 days prior to the time of presentation. The outcome of the gynecologic examination was as follows: The vulva was normal; recto-abdominal examination revealed a tender mass measuring approximately 50 mm in diameter protruding into the upper third of the vagina. The corpus of the uterus was palpable and was normal in size. Both adnexae were thick and tender. Ultrasonography revealed an enclosed mass in the cervical canal measuring 59 × 35 × 45 mm and a left adnexal mass, which was a left hemosalpinx, measuring 51 × 38 × 35 mm. The right salpinx was found to be enlarged as well. The size of the uterus was 62 × 35 × 29 mm, and there was no obvious fluid inside the uterine cavity. Both the kidneys and the ureters were normal. The bladder was also normal. Magnetic resonance imaging (MRI) indicated that the cervical canal was enlarged with a mass measuring 50 × 45 × 40 mm in the canal, which was suspected to be an old blood clot (see Fig. 1, *A*,*C*). Adnexal masses were found bilaterally, while there was no evidence of enlargement of the corpus of the uterus. The results of blood analysis were as follows: fibrinogen: 5.36 g/L (normal range: 2-4 g/L), white blood cell count: 14.53 × 10^9/L (normal range: 4.0-10.9 × 10^9/L), hematocrit: 34.3% (normal range: 37%-52%) and neutrophils: 80.7% (normal range: 50%-70%). The urinalysis was normal. Pregnancy testing was negative. The liver function test, prothrombin time, and blood urea, electrolyte, and creatinine levels were normal.

Under deep sedation by intravenous administration of propofol (Diprivan, Astra-Zeneca, Shanghai, China), the patient underwent vaginoscopy and hysteroscopy using a diagnostic hysteroscope (Bettocchi hysteroscope, outer diameter of 4.5 mm, Karl-Storz Company, Germany) using a "no touch" technique[2] during which the vagina was found to be normal with the cervix bulging into the vagina (see Fig. 2, *A*). The external cervical os was located with a blood clot hanging through it (see Fig. 2, *A*). The blood clot was removed with a forceps during the hysteroscopy, and the external os was more visible. The opening was so small that

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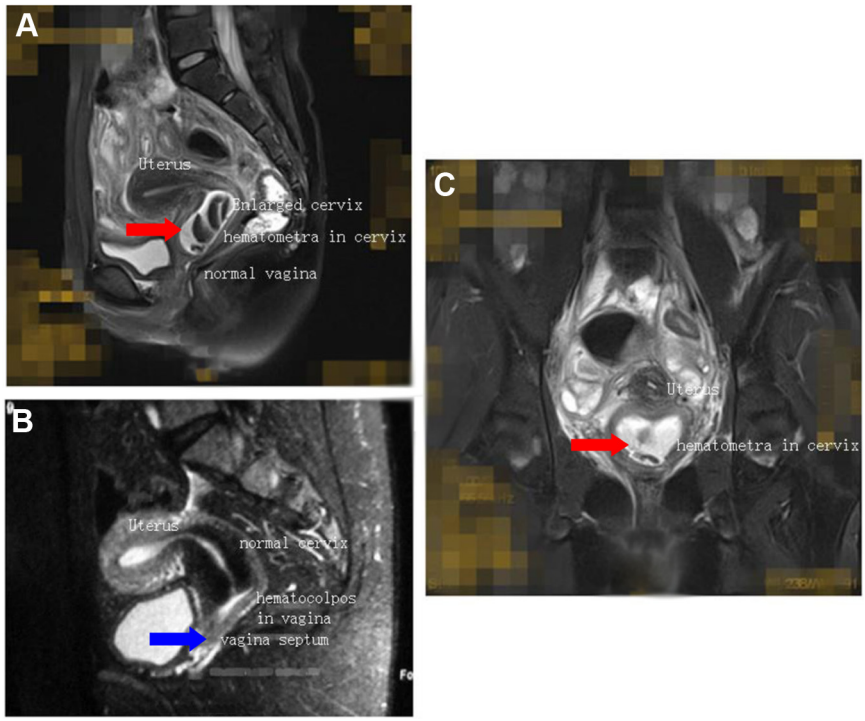

Fig. 1. (A) Congenital external cervical os stenosis: old blood clots had accumulated in the enlarged cervical canal as shown by the red arrow (sagittal view of the MRI). (B) Transverse vaginal septum[5]: The MRI showed the uterus with cervix and the upper 2 cm of the vagina containing some blood products. There was a septum between the upper and lower part of vagina, as indicated by the blue arrow. (C) Congenital external cervical os stenosis: old blood clots had accumulated in the enlarged cervical canal as shown by the red arrow (coronal view of the MRI).

a hysteroscope with 4.5 mm outer sheath could not pass through the external cervical os. A 5-Fr forceps was introduced into the external os and used to expand it by gently opening the forceps while maintaining the position in the external os (see Fig. 2, *B*). A hysteroscope with a 4.5 mm outer sheath was gently introduced through the external

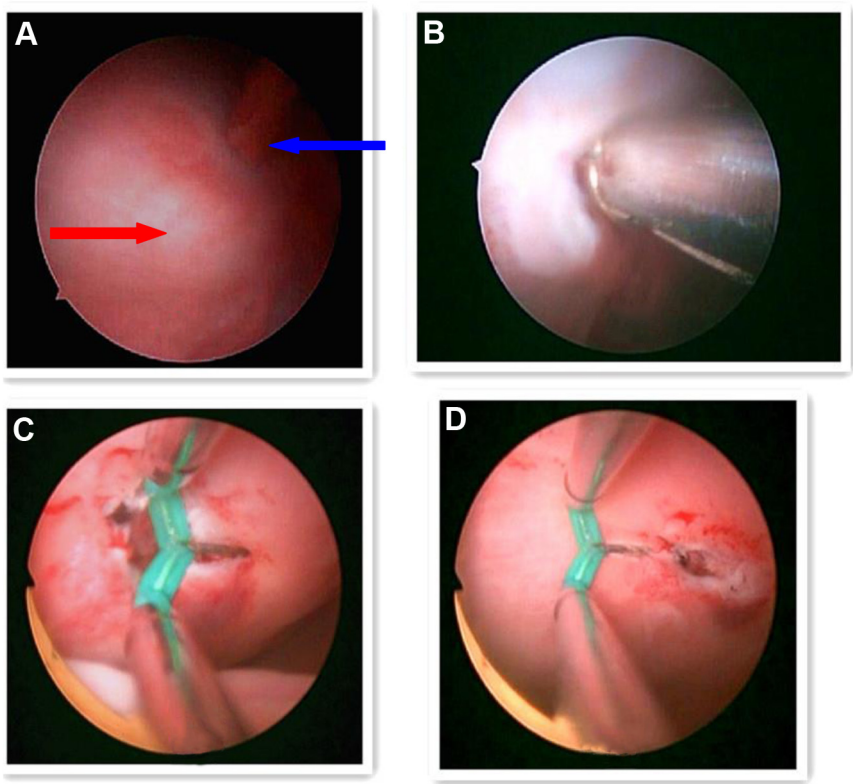

Fig. 2. (A) The vagina was found to be normal, with the cervix bulging into the vagina (the red arrow), while the blue arrow indicates the narrowed external os and old blood. (B) A 5-Fr forceps was introduced into the external os. (C) The external cervical os was electrically cut at 3-o'clock. (D) The external cervical os was electrically cut at 9-o'clock.