CASE REPORT

Hysteroscopic resection of vaginal septum in an adolescent virgin with obstructed hemivagina

E.M. Tsai¹, P.H. Chiang², S.C. Hsu¹, J.H. Su¹ and J.N. Lee¹

¹Department of Obstetrics and Gynecology and ²Department of Urology, Kaohsiung Medical College Hospital, Kaohsiung, Taiwan

This article reports on one patient with a double uterus, unilateral vaginal obstruction, with hemi-haematocolpos and ipsilateral renal agenesis. Early accurate diagnosis followed by the excision of the obstructing vaginal septum offers complete relief of symptoms, while preserving reproductive capacity. Unlike conventional excision of vaginal septum, we used resectoscope excision with cutting electrode under continuous pure distilled water irrigation. The post-operative course was uneventful, and haematocolpos and severe dysmenorrhea disappeared. The resected vaginal area revealed re-epithelialization by hysteroscope follow-up one year after resection. With advancements in resectoscopic operation, evaluation and treatment of vaginal disorders in babies and virgins is very feasible.

Key words: haematocolpos/operative hysteroscope/vaginal septum

Introduction

Duplicated uterus associated with unilateral imperforate vagina is a rare congenital anomaly (Acien, 1997). Owing to the vaginal septum, one side has no outlet for menstrual blood. Dysmenorrhea begins soon after menarche and worsens. The obstructed hemivagina becomes distended with the menstrual efflux of the ipsilateral uterus (Rock and Jones, 1980). These patients complain of progressively worsening dysmenorrhea. Some complications have been reported, such as hydro-nephrosis and pus accumulation in the obstructed vagina (Gakiya et al., 1995). Holloway et al. (1980) demonstrated a case of spontaneous rupture of the vaginal septum with unilateral imperforate vagina. Early diagnosis and treatment are urgently required. Careful excision of the vaginal septum is the treatment of choice for a unilateral vaginal obstruction. Conventionally, hysterecomy must be performed by excising vaginal septa in adolescents with an intact hymen. Sometimes, the obstructing septum is thick and removal can be difficult (Rock and Thompson, 1997). The restricted field of operation in the virgin complicates the operation. Resectoscopic resection may be of potential value to virgins with an intact hymen (Badsk, 1993).

Case report

A 12 year old girl was brought to the emergency department because of severe dysmenorrhea. Previous history revealed that her menstrual cycles had been normal and regular, except for progressively worsening dysmenorrhea since menarche (about 5 months previously). She was administered medicine for relieving dysmenorrhea. Dysmenorrhea persisted even after this administration. Sonography examination revealed a cystic mass along the right lateral wall of the vagina measuring 10.3 × 6.4 × 5.7 cm. Magnetic resonance imaging revealed a cystic mass measuring 12 × 6 × 6 cm in the vagina with high T₁ and high T₂ signal component. The duplication of the uterine lumens and bicornuate-shape of uterus were appreciated (Figure 1). Excretory urography revealed non-visualization of the right kidney. The left kidney was somewhat hypertrophic and the left collecting system was normal. An operation was arranged under the diagnosis of didelphys with right haematocolpos.

Resectoscope was performed for the patient under general anaesthesia. The dissociation of pure distilled water is negligible. It has been used safely for resectoscope work as a distension medium in our hospital. It is also more cost-effective than glycine and Hyskon. The vagina was distended with continuous pure distilled water irrigation. A bag of infusion fluid suspended 60 cm above the uterus, with a pressure of 80 mm Hg by a pump, was required to distend the vagina. After punching with a needle-cutting electrode, a large amount of chocolate-coloured fluid was drained and the vaginal septum was excised piecemeal with a cutting electrode (60 W of cutting current) completely (Figure 2). The operation took about 45 min. The patient was discharged the day following the operation with a good prognosis. Finally, complete relief of symptoms was observed after excision of the vaginal septum for 1 year of follow-up. Repeat hysteroscopic examination revealed re-epithelialization in the resection field. No wound retraction or stenosis was observed.

Discussion

Uterus didelphys arises owing to an absence of fusion of the Mullerian ducts. Sinovaginal bulb maldevelopment results in partial vaginal septum (Wiersma et al., 1976). Uterine didelphys with unilateral haematometrolpos is almost invariably asso-
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Figure 1. Echography and magnetic resonance imaging (MRI) demonstrating a right-sided cystic mass in the vagina. (A) Longitudinal and (B) transverse sonogram revealed an anechoic mass measuring 10.3×6.4×5.7 cm; (C) MRI displayed uterus didelphys, and right-side obstructed hemivagina with haematocolpos.

Figure 2. The vaginal septum was excised with cutting electrode. After drainage of chocolate-coloured fluid by a needle-cutting electrode, the vaginal septum was excised piecemeal using a loop cutting electrode.

ciated with renal agenesis or renal dysplasia with an ectopic ureter on the same side of the genital obstruction (Rock, 1986). As reported previously (Gilliland and Dyck, 1976), drainage of the obstructed hemivagina, along with total excision of the septum several months later, should lead towards a relatively intact reproductive tract.

Operative hysteroscopy has become increasingly applied. This procedure makes endometrial ablation, submucosal myomectomy and resection of intrauterine septum easy and successful (Donnez and Nisolle, 1997). Where appropriate patients have been chosen, hysteroscopic surgery has demonstrated several advantages over the conventional procedures (Jacobsen and DeCherney, 1997). For a rare congenital anomaly, such as vaginal septum, the resectoscope permits exploration of the vaginal pathology of girls with an intact hymen ring. The small diameter, the magnification and the continuous fluid irrigation give ideal conditions for endoscopic evaluation of vaginal disorders in virgins. This is the first report in the English language, to our knowledge, of resectoscopic resection of a vaginal septum. The procedure seems effective and safe, providing one of the simplest and safest operations in such cases. We have followed up the case for more than 1 year with good prognosis. Because the vaginal opening may later shrink and close, it cannot be overemphasized that long-term follow-up is essential.

References


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