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Complete longitudinal vaginal septum resection. Description of a bloodless new technique

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Summary

Purpose of investigation: To describe a novel approach for longitudinal vaginal septum (LVS) resection. *Materials and Methods:* Two cases of young girls with a uterus didelphys and a longitudinal vaginal septum. The technique consisted in grasping the vaginal septum with a laparoscopic 33-cm long bipolar cutting forceps, five-mm in diameter, and divided it to its midportion towards the two cervices. *Results:* In both cases, the procedure was straightforward, uncomplicated, completed within three minutes and the patients were discharged four hours later. It was associated with minimal blood loss, short recovery time, absence of local ischemia, and optimum healing process. *Conclusion:* The authors believe that surgical safety, efficacy and operative result make bipolar cutting forceps a tailored option for LVS resection.

Key words: Uterus didelphys; Longitudinal vaginal septum; Bipolar cutting forceps.

Introduction

Uterine anomalies are thought to affect approximately one to two percent of women, depending on the population that is assessed. Although the majority is asymptomatic and can remain undetected, a proportion is linked to sexual, reproductive, and obstetric complications and will need investigation and specialist management [1]. The aim of this article was to describe a novel approach regarding surgical management of longitudinal vaginal septum (LVS).

Materials and Methods

The authors present two cases of young girls having a uterus didelphys and a complete LVS. The first one was a 19-year-old girl that coincidentally suffered from congenital thrombocytopenia. Her usual platelet count was ranged between 15,000 and 20,000. Her condition became evident due to difficulty at coitarche and bleeding because of trauma to the septum during intercourse. The second case concerned a 21-year- old girl presenting with severe dysmenorrhea and dyspareunia since her first sexual relations.

Results

The operations were performed under general anesthesia with the patients in stirrups and in both cases the same surgical technique was used. The urinary bladder was emptied with a catheter. The external genitalia and vagina were prepped in the standard fashion.

The vaginal septum was grasped with a laparoscopic 33-cm long bipolar cutting forceps five-mm in diameter and divided to its midportion towards the two cervices (Figure 1). The bipolar cutting forceps incorporates precision bipolar forceps for grasping and coagulation, and a surgical cutting blade positioned between the forceps jaws to allow transection of the coagulated tissue. The bipolar forceps was connected to an electrosurgery unit set at 40 W. Repeated applications of the bipolar diathermy were performed, as necessary for complete septum excision.

Both procedures were straightforward, uncomplicated, and completed within three minutes. They were also associated with minimal blood loss despite the patient's bleeding diathesis in the first case. The immediate postoperative period was uneventful and the patients were discharged four hours later. In both cases postoperative follow-up revealed a wide vagina with a perfectly healed incision (Figure 2). The girls reported no further difficulties with intercourse.

Discussion

Uterine anomalies are most commonly classified using the American Fertility Society revised classification, which identifies seven different classes [2]. Uterus didelphys is a rare congenital malformation, occurring in approximately 0.1%–0.5% of women, although the exact occurrence is difficult to determine because it may go undetected in the absence of medical and reproductive complications [3]. It arises from a defect in the lateral fusion of the Müllerian ducts. Uterus didelphys is often associated with a LVS, which results from an incomplete resorption of the vaginal

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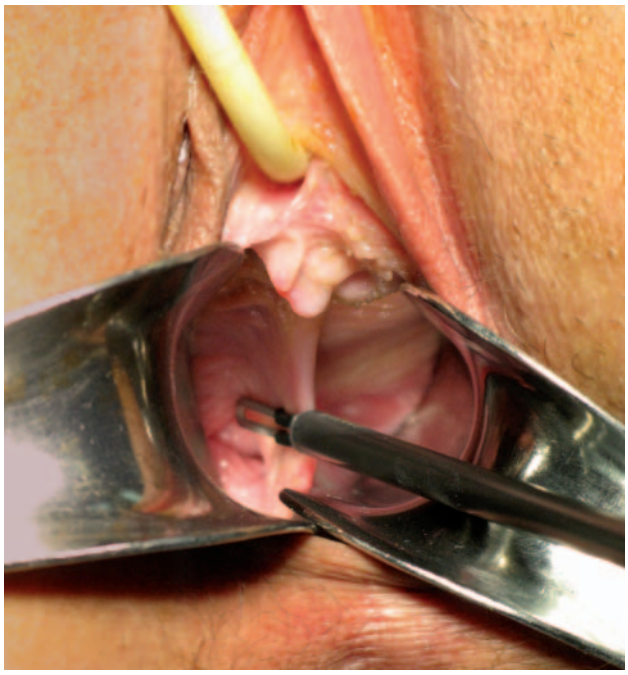

Figure 1. — Vaginal application of a laparoscopic bipolar cutting forceps to resect the vaginal septum.

Figure 2. — Vaginal canal after the septum is fully resected (Case 1).

septum during embryogenesis of the vagina. LVS is defined as complete when it extends throughout the full length of the vagina from cervix to introitus [4,5].

A LVS is often asymptomatic, but may be associated with dyspareunia, postcoital bleeding or difficulty to insert a tampon. Diagnosis is readily made, by speculum examination, which will reveal the septum. Interestingly, the majority of patients, such as the present one, manage to become sexually active, as one side of the vagina is wider than the other and penetration is easier on this side, which will thereby be gradually further dilated [4].

Although metroplasty for the unification of the two uterine cavities has been abandoned because of increasing reports of affected fertility outcomes [6], vaginal septa are usually surgically removed to improve symptomatology. The usual approach that is classically described involves the excision by scissors after the application of Kelly or Kocher forceps on either side of the septum to prevent any blood loss. The edges are then sutured for hemostasis with 3-0 absorbable sutures [7].

Vaginal septum resection using a harmonic scalpel has been described in the past [8]. However, the fact that additional sutures were used in that particular case report, may suggest that coaptive coagulation is less effective for hemostasis than diathermy. The use of the bipolar cutting forceps appears to be a safe and effective innovative method for resection of LVS. The present authors' approach is unique, combining the accuracy of a laparoscopic instrument in vaginal surgery. Reinforcing sutures are not required, as this resection technique offers excellent hemostasis, without lateral tissue damage from thermal spread. The short recovery time, the absence of local ischemia, and the optimum healing process are also very important advantages of this surgical technique, which may possibly be completed under local anesthesia.

Conclusion

To the authors' knowledge, this is the first case where bipolar cutting forceps have been used for treatment of a LVS. Although a higher number of cases are needed to verify the present findings, the authors believe that surgical safety, efficacy, and operative results make bipolar cutting forceps a tailored option for resection of LVS.

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