Case Report

Use of a Hysteroscopic Morcellator to Resect Miscarriage in a Woman With Recurrent Asherman’s Syndrome

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ABSTRACT

Uterine curettage may result in formation of intrauterine adhesions, which can predispose to recurrent miscarriage [1]. Herein is presented a video case report of a 24-year-old woman with recurrent miscarriages and recurrent intrauterine adhesions after treatment of non-progressive pregnancies. Targeted intrauterine pregnancy tissue removal using a hysteroscopic morcellator was performed to reduce the risk of adhesion recurrence. Successful removal of products of conception, without subsequent adhesion formation, and an ongoing viable pregnancy followed. Selective targeted removal of products of conception may offer some advantage to women with a predisposition to recurrent Asherman’s syndrome. Journal of Minimally Invasive Gynecology (2014) 21, 1118–1120 © 2014 AAGL. All rights reserved.

Keywords: Asherman’s syndrome; Hysteroscopic morcellator; Intrauterine adhesions; Recurrent miscarriage; Targeted tissue removal

DISCUSS

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Intrauterine adhesions causing Asherman’s syndrome most commonly occur after uterine curettage and may result in recurrent miscarriage [1]. Surgeons must be mindful that uterine instrumentation may result in intrauterine adhesions during treatment of pregnancy loss, predisposing to further miscarriages. Attempts should be made to minimize damage to the endometrial basal layer to reduce this risk.

Case Report

A 24-year-old woman had 3 miscarriages and was treated for Asherman’s syndrome after each miscarriage. Investigation determined that she was homozygous for the MTHFR gene mutation; all other investigations were unremarkable.

Following curettage after a miscarriage at 8 weeks, amenorrhea led to stage III Asherman’s syndrome, diagnosed and treated via hysteroscopic sonohysterography and postoperative cyclical oral estrogen therapy. Four months later an anembryonic pregnancy was diagnosed at 7 weeks. Curettage was performed, and post-procedure hysteroscopy demonstrated a normal cavity. Cyclic estrogen therapy was given. Follow-up hysteroscopy 8 weeks later demonstrated stage II Asherman’s syndrome, which was again treated surgically.

Another anembryonic pregnancy was diagnosed at 7 weeks, and targeted removal of retained products of conception was performed using the MyoSure tissue removal system (Hologic, Inc., Bedford, MA). Targeted complete tissue removal with direct visualization (Video 1) was performed, with visibility issues noted when the vascular implantation site was removed. A 2.4-L fluid deficit was noted at the end of the procedure. There was no evidence of fluid overload or electrolyte disturbance, and no other operative complications. The patient was discharged on the same day, and vaginal bleeding rapidly slowed over 24 hours. Cyclic oral estrogen therapy was started.

To avert further surgical intervention, hysteroscopic contrast medium-enhanced sonography was performed, which confirmed a normal uterine contour, patent tubes, and no sign of intrauterine adhesions (Fig. 1.) Since resection using a hysteroscopic morcellator, the patient has had 2 pregnancies. The first was a chemical pregnancy only, and the second is currently at 20 weeks.
Discussion

The prevalence of intrauterine adhesions varies from 0.3% as an incidental finding to 21.5% in women who have undergone postpartum curettage [2]. In many women, intrauterine adhesions may be asymptomatic [3].

A review article including 1856 women with intrauterine adhesions revealed that most had previously undergone uterine curettage: 67% after miscarriage or to terminate a pregnancy, and 22% because of postpartum hemorrhage [2]. A randomized controlled trial published in 2002 included 82 women who were randomized to undergo either surgical or nonsurgical management of incomplete miscarriage. The women underwent follow-up hysteroscopy at 6 months after treatment. During hysteroscopy, no intrauterine adhesions were identified in the nonsurgical group, whereas 2 of 26 patients (7.7%) in the surgical group were found to have intrauterine adhesions [4].

Intrauterine adhesions arise from damage to the basilar layer of the endometrium, most commonly after uterine curettage. Basilar damage results in formation of granulation tissue. Multiple sites of granulation tissue formation may become adherent to one another, resulting in bands of adhesions traversing the uterine cavity or in severe disease obliterating the uterine cavity completely.

Intrauterine adhesions and disturbance of the intrauterine environment may result in menstrual complications such as oligomenorrhea, amenorrhea, and pelvic pain, and in reproductive complications including subfertility and recurrent miscarriage. Pregnancy complications including preterm delivery, placenta previa, and placenta accreta are more common in women with known intrauterine adhesions [5].

Recurrent miscarriage has been associated with intrauterine adhesions. Repeated uterine curettage for treatment of miscarriage may cause damage to the basilar layer, leading to adhesions, or it may be that adhesions initiate miscarriage. Studies have suggested that 5% to 39% of women with recurrent miscarriage have intrauterine adhesions [3,6].

Treatment of intrauterine adhesions varies, with no single technique demonstrating superiority. In our unit, fluoroscopically guided hysteroscopic synchiotylysis is favored because of its documented clinical outcomes [7].

The hysteroscopic morcellator has been described for removal of intrauterine myomas and polyps, with the benefits of reduced operative time, compared with conventional hysteroscopic resection, and fewer fluid-related complications [8]. Surgeons must ensure that they closely monitor fluid input and output and consider discontinuing the procedure in the event of large fluid deficits, to limit the risk of fluid overload and electrolyte disturbances [9]. When trialed for the intended use by gynecologic residents in training, there was a significant reduction in operative time when compared with standard hysteroscopic resection, and surgeon and trainer scores for convenience of the technique favored the hysteroscopic morcellator [10]. The MyoSure device enables direct visualization of the uterine cavity during surgery, including evacuation of retained products of conception. An outer sheath houses a 2.3-mm cutting blade that rotates at 8000 rpm and reciprocates at 180 times per minute. Continuous suction aspirates as it cuts, keeping the field clear, with the instrument always in the cavity, and collects the specimen for pathologic analysis.

There is a potential benefit of targeted resection of products of conception in women prone to intrauterine adhesions, as opposed to standard uterine curettage to evacuate the uterus after a failed pregnancy. This has been previously performed via hysteroscopic resection of products in an attempt to prevent further damage to the endometrium that may provoke additional adhesions.

Inasmuch as the hysteroscopic morcellator has proved easy to use and faster than conventional technology, it may become a valid option for resection of products of conception in women at high risk of intrauterine adhesions.

Supplementary Data

Supplementary data related to this article can be found online at http://dx.doi.org/10.1016/j.jmig.2014.05.006.

References