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Case Report

Successful live birth following mechanical hysteroscopic adhesiolysis with MyoSure for Asherman syndrome: a case report

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ABSTRACT

Asherman syndrome is characterised by symptomatic intrauterine adhesions that may cause menstrual disturbance, pelvic pain and subfertility. We describe a 28-year-old G3P1 woman who developed dysmenorrhoea, oligomenorrhoea and difficulty conceiving after a term vaginal birth complicated by severe postpartum haemorrhage, manual removal of an adherent placenta and subsequent suction curettage for retained products of conception. Initial hysteroscopy demonstrated extensive uterine cavity obliteration, and adhesiolysis was attempted by hydrodilatation. At repeat hysteroscopy approximately 16 months postpartum, persistent adhesions obscured the left tubal ostium. Mechanical adhesiolysis was performed using the MyoSure hysteroscopic tissue removal system with concomitant laparoscopic observation. Subsequent hysteroscopic inspection demonstrated restoration of the uterine cavity, and laparoscopic tubal dye-study confirmed bilateral tubal patency. An intrauterine Foley balloon was retained for seven days, with postoperative oral antibiotics and four weeks of oestrogen-based therapy. The patient conceived four months later and delivered a live male infant at term. She subsequently underwent total laparoscopic hysterectomy for persistent severe dysmenorrhoea after completing her reproductive goals. This case documents a successful reproductive outcome following MyoSure-assisted adhesiolysis. MyoSure may provide a non-electrosurgical option for adhesiolysis in selected patients; however, comparative evidence is insufficient to establish superiority over conventional techniques or determine the optimal postoperative regimen.

Keywords: Asherman syndrome, Intrauterine adhesions, Hysteroscopy, Adhesiolysis, MyoSure, Live birth

INTRODUCTION

Asherman syndrome describes symptomatic intrauterine adhesions (IUA) associated with menstrual disturbance, infertility, recurrent pregnancy loss and/or pelvic pain. IUAs most commonly follow trauma to the basal endometrium, particularly after pregnancy-related uterine instrumentation. The spectrum of disease ranges from thin, filmy adhesions to dense fibrosis with partial or complete obliteration of the uterine cavity. Hysteroscopy remains the reference standard for diagnosis because it permits direct assessment of the location and extent of adhesions and allows treatment during the same procedure.¹⁻³

For women with symptomatic IUAs who desire future fertility, the principal goals of treatment are restoration of normal uterine cavity anatomy, preservation of functional endometrium and reduction of recurrent adhesion formation. Direct hysteroscopic adhesiolysis is recommended, but no single operative technique has been established as superior. Cold scissors, blunt dissection and electrosurgical techniques have all been described, while ultrasound, fluoroscopy or laparoscopy may be used as adjuncts in difficult cases. Postoperative approaches include intrauterine balloons or stents, oestrogen with or without progestogen, hyaluronic-acid barriers and second-look hysteroscopy; however, evidence regarding the effect of these strategies on subsequent live birth remains limited.^{2,3}

Hysteroscopic tissue removal systems provide mechanical resection without radiofrequency electrosurgery and have been widely used for polyps, submucosal fibroids and retained products of conception. Evidence supporting their use specifically for adhesiolysis in Asherman syndrome is comparatively sparse.⁴ We describe a patient who developed symptomatic IUAs after postpartum uterine instrumentation and subsequently achieved a term live birth following MyoSure-assisted mechanical adhesiolysis, laparoscopic assessment, temporary intrauterine Foley balloon placement and postoperative hormonal therapy.

CASE REPORT

A 28-year-old G3P1 woman presented with dysmenorrhoea, oligomenorrhoea and difficulty conceiving following a complicated term vaginal birth. Her background included endometriosis previously treated with two laparoscopic excision procedures. Her body mass index was 30 kg/m².

The vaginal birth was complicated by severe primary postpartum haemorrhage and an adherent placenta requiring transfer to the operating theatre for manual removal. Estimated blood loss was approximately 2.5 l. The placenta was removed piecemeal and a blunt curette was used to remove suspected residual products of conception. Abnormal placental adherence raised clinical concern for placenta accreta. A Bakri balloon was inserted for haemorrhage control.

Nineteen days postpartum, she re-presented with a secondary postpartum haemorrhage, with an estimated blood loss of approximately 2.6 l. She returned to theatre and underwent suction evacuation and curettage for retained products of conception, followed by insertion of a Bakri balloon. Histopathology confirmed products of conception.

In the months after these procedures, she developed altered menstrual function with oligomenorrhoea and dysmenorrhoea and experienced subfertility while attempting to conceive. Given the temporal relationship between pregnancy-related uterine instrumentation and her new menstrual and reproductive symptoms, intrauterine adhesions were suspected. Diagnostic hysteroscopy demonstrated an extensively obliterated endometrial cavity in which neither tubal ostium could initially be visualised. These findings, together with her symptoms, were consistent with Asherman syndrome. Initial adhesiolysis was undertaken by hydrodilatation.

Persistent disease was subsequently identified and, approximately 16 months postpartum, a repeat hysteroscopy with adhesiolysis and concomitant laparoscopic tubal dye assessment was performed.

At hysteroscopy, intrauterine adhesions continued to obscure the left tubal ostium, while the right ostium could

be visualised. Mechanical adhesiolysis was performed using a MyoSure hysteroscopic tissue removal system. The procedure was undertaken with concomitant laparoscopy, providing assessment of the pelvis during treatment and allowing tubal patency to be evaluated.

Following adhesiolysis, methylene blue was introduced and bilateral tubal spill was observed laparoscopically, confirming patency of both fallopian tubes. Repeat hysteroscopic inspection demonstrated restoration of the endometrial cavity and improved visualisation of the previously affected left cornual region (Figure 1). No operative complication was documented.

At the completion of the procedure, a Foley balloon catheter was placed within the uterine cavity and retained for seven days to maintain separation of the opposing uterine surfaces during early healing. The patient received oral antibiotic therapy and four weeks of postoperative oestrogen-based hormonal therapy. Four months after the procedure she conceived.

The pregnancy progressed to term and resulted in the live birth of a male infant. Following this pregnancy, she continued to experience severe dysmenorrhoea. Given the persistence of her symptoms and completion of her reproductive goals, she ultimately elected to undergo total laparoscopic hysterectomy.

Table 1: Clinical timeline.

Time	Clinical event
Birth	Term vaginal birth; severe postpartum haemorrhage; adherent placenta/suspected accreta; manual removal and blunt curettage; Bakri balloon
19 days postpartum	Secondary postpartum haemorrhage; suction evacuation and curettage for retained products; histopathology confirmed products of conception
Following months	New dysmenorrhoea, oligomenorrhoea and subfertility
Initial hysteroscopy	Near-complete cavity obliteration; neither ostium initially visible; hydrodilatation adhesiolysis performed
Approximately 16 months postpartum	Repeat hysteroscopy: persistent adhesions obscuring left ostium. MyoSure mechanical adhesiolysis with laparoscopy and dye study; bilateral tubal patency and restored cavity confirmed
Postoperative	Intrauterine Foley balloon for 7 days; oral antibiotics; 4 weeks of oestrogen-based hormonal therapy
4 months later	Conception
Subsequent outcome	Term live birth of a male infant

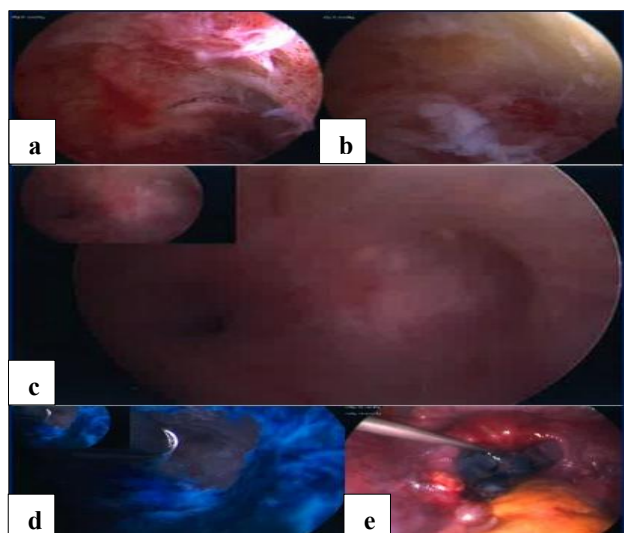


Figure 1: Hysteroscopic and laparoscopic findings, (a and b) intrauterine adhesions consistent with Asherman syndrome, (c) persistent adhesions with obliteration of the left tubal ostium and visualisation of the right ostium, (d) hysteroscopic appearance following MyoSure mechanical adhesiolysis at the left cornual region, and (e) laparoscopic visualisation of methylene-blue spill confirming tubal patency.

DISCUSSION

Intrauterine adhesions (IUAs), or synechiae, are fibrous bands of tissue that form within the endometrial cavity, most commonly following trauma from intrauterine procedures. When IUAs are accompanied by symptoms such as abnormal uterine bleeding, pelvic pain or infertility, the condition is referred to as Asherman syndrome. IUAs may occur following pregnancy-related uterine procedures, intrauterine surgery, inflammation or infection. Trauma to the basal layer of the endometrium disrupts normal endometrial regeneration, and subsequent healing of opposing injured uterine surfaces may result in fusion and the formation of fibrous tissue bridges.¹⁻³

IUAs range from thin, filmy adhesions to dense fibrotic bands and extensive obliteration of the uterine cavity. The American Society for Reproductive Medicine classification incorporates the extent of uterine cavity involvement, the hysteroscopic appearance of the adhesions and the patient's menstrual pattern to classify disease as mild, moderate or severe.^{2,3} Although formal ASRM scoring was not documented in this case, the initial hysteroscopy demonstrated extensive cavity obliteration with neither tubal ostium visible.

Diagnosis is best made by direct visualisation at hysteroscopy, which remains the reference standard and allows simultaneous treatment. Other investigations, including hysterosalpingography and sonohysterography, can suggest cavity abnormalities but are less accurate than

hysteroscopy and a negative study does not reliably exclude IUAs.^{2,3}

Management of symptomatic Asherman syndrome is primarily hysteroscopic adhesiolysis followed by strategies aimed at reducing adhesion reformation. Blind dilatation and curettage are not recommended because adhesions may be missed and further trauma to the remaining endometrium may occur.² The aim of surgery is to restore normal uterine cavity anatomy while preserving functional endometrium and, where desired, fertility. Adhesiolysis may be technically challenging when normal anatomical landmarks are obscured, and the risks of false passage and uterine perforation must be considered. Dissection is performed under direct hysteroscopic vision, generally progressing from the central cavity towards the fundus and lateral walls, with the tubal ostia providing useful landmarks when visible. Care should be taken to avoid excessive dissection into the myometrium.^{2,3}

Adhesiolysis may be performed using non-thermal techniques such as hysteroscopic scissors, blunt dissection, or other hysteroscopic instruments. In this case, persistent adhesions were mechanically divided using the MyoSure hysteroscopic tissue removal system. MyoSure provides mechanical cutting with simultaneous tissue aspiration without radiofrequency electrosurgical energy at the treatment site. Avoidance of thermal energy may be conceptually attractive in fertility-preserving surgery where additional injury to residual functional endometrium is undesirable; however, comparative evidence specifically supporting MyoSure for adhesiolysis remains limited and superiority over conventional techniques has not been established. A comparative study of benign intrauterine lesions reported favourable operative and reproductive outcomes with MyoSure compared with electroresection, but these findings cannot be directly extrapolated to Asherman syndrome.⁵

Adjunctive ultrasound, fluoroscopy or laparoscopy may be considered during difficult adhesiolysis to assist orientation and reduce the risk associated with extensive dissection.² In this case, concomitant laparoscopy provided extrauterine observation during treatment and also allowed immediate assessment of tubal patency. Following adhesiolysis, bilateral spill of methylene blue was demonstrated and repeat hysteroscopy confirmed restoration of the uterine cavity.

Prevention of adhesion reformation is an important component of postoperative management. Mechanical separation of opposing endometrial surfaces during the early healing period can be achieved using an intrauterine balloon catheter, stent or appropriate intrauterine device. A Foley or paediatric balloon catheter may be placed within the uterine cavity after adhesiolysis and is commonly retained for several days. The proposed mechanism is maintenance of separation between recently dissected uterine surfaces while re-epithelialisation occurs. AAGL/ESGE guidance concludes that an intrauterine

device, stent or catheter appears to reduce postoperative adhesion reformation, although data regarding subsequent fertility outcomes remain limited.² In this case, a Foley balloon catheter was retained for seven days.

Semi-solid adhesion barriers, particularly hyaluronic acid and auto-cross-linked hyaluronic acid gels, have also been investigated after hysteroscopic adhesiolysis. These agents provide a temporary physical barrier between injured endometrial surfaces during healing. AAGL/ESGE guidance concludes that hyaluronic acid barriers reduce adhesion reformation; however, whether this translates into improved subsequent pregnancy or live-birth rates remains uncertain.² Hyaluronic acid was not used in the present case, but it represents an alternative or adjunctive postoperative strategy where prevention of recurrent adhesions is a concern.

Antibiotics are frequently administered when an intrauterine balloon or other foreign body is left within the uterine cavity, reflecting concern regarding a theoretical risk of ascending infection. However, evidence supporting routine antibiotic prophylaxis in this setting is limited. AAGL/ESGE guidance notes that there is no evidence to support or refute preoperative, intraoperative or postoperative antibiotics for surgical treatment of IUAs, and routine prophylaxis is not otherwise recommended for uncomplicated diagnostic or operative hysteroscopy.² Antibiotic use therefore remains dependent on individual clinical practice. In this patient, oral antibiotics were administered while the intrauterine Foley catheter was in situ.

Postoperative hormonal therapy, often referred to as Kaufmann therapy, has traditionally been used following hysteroscopic adhesiolysis with the aim of promoting regeneration of the residual endometrium and reducing adhesion reformation. Oestrogen is used to stimulate endometrial proliferation and may be followed by a progestogen to induce withdrawal bleeding and cyclical endometrial regeneration. Various regimens have been described, and there is no established optimal oestrogen dose, formulation or duration. AAGL/ESGE guidance states that postoperative oestrogen, with or without progestogen, may reduce recurrence of IUAs, but comparative evidence regarding reproductive outcomes is limited.² Kakinuma et al also reported postoperative Kaufmann therapy after hysteroscopic adhesiolysis in a patient who subsequently achieved a live birth.¹⁰ In the present case, four weeks of postoperative oestrogen-based therapy was administered following adhesiolysis and Foley balloon placement.

Follow-up hysteroscopy can be used to assess restoration of the uterine cavity and identify recurrent adhesions while they remain amenable to further treatment. Recurrence is an important limitation following adhesiolysis and varies with the initial severity of disease.^{2,3} Consequently, postoperative treatment is often multimodal; however, the successful reproductive outcome in an individual patient

cannot be attributed to the balloon catheter, hormonal therapy or operative technique in isolation.

Reproductive outcomes following treatment of Asherman syndrome are encouraging but variable. A systematic review including 54 studies and 4,640 women reported a pooled pregnancy rate of approximately 51% after surgical treatment.⁶ A later cohort of 500 women reported a live-birth rate of 67.4% among pregnancies achieved after treatment.⁷ Other cohorts have similarly demonstrated restoration of menstruation and subsequent pregnancy after hysteroscopic adhesiolysis.⁸ These data reinforce that live birth after adhesiolysis is not itself unusual; the value of the present case lies instead in documenting a successful reproductive outcome after mechanical hysteroscopic tissue removal was used directly for persistent adhesions.

Two previously published reports are particularly relevant to the present case. Harpham and Abbott described use of a hysteroscopic morcellator for targeted removal of pregnancy tissue in a woman with recurrent miscarriage and recurrent Asherman syndrome; the aim was to minimise further intrauterine trauma.⁹ Their report demonstrates use of hysteroscopic mechanical tissue removal in a patient predisposed to Asherman syndrome, but the device was used to remove products of conception rather than adhesiolysis alone. Kakinuma et al subsequently reported a term live birth after hysteroscopic adhesiolysis performed under laparoscopic observation, followed by an intrauterine device and Kaufmann therapy.¹⁰ Our case differs in the use of the MyoSure tissue removal system directly for mechanical adhesiolysis and a temporary Foley balloon as the postoperative intrauterine barrier.²

Pregnancy after Asherman syndrome also warrants careful obstetric surveillance. A systematic review found increased rates of adverse reproductive and obstetric outcomes after surgical treatment, including miscarriage, ectopic pregnancy, cervical insufficiency and placenta accreta spectrum.⁶ This is particularly relevant in the present patient because her preceding birth was complicated by an adherent placenta with clinical concern for placenta accreta. Although the subsequent pregnancy reached term, counselling after successful adhesiolysis should include discussion of abnormal placentation and other pregnancy complications, with antenatal management individualised according to the patient's history and placental findings.

CONCLUSION

In a 28-year-old woman with symptomatic intrauterine adhesions following severe postpartum haemorrhage and repeated postpartum uterine instrumentation, persistent adhesions were successfully treated using MyoSure mechanical hysteroscopic adhesiolysis with concomitant laparoscopy, followed by temporary intrauterine Foley balloon placement and postoperative hormonal therapy. Restoration of the uterine cavity and bilateral tubal patency

was demonstrated at surgery, and the patient conceived four months later and delivered a live male infant at term. Mechanical hysteroscopic tissue removal may represent a useful non-electrosurgical option in selected cases of intrauterine adhesions, but comparative evidence is insufficient to establish superiority over established adhesiolysis techniques. Further research should evaluate recurrence, endometrial recovery and reproductive outcomes after different operative and postoperative strategies.

Recommendations

Pregnancy-related uterine instrumentation is an important risk factor for symptomatic intrauterine adhesions, direct hysteroscopic adhesiolysis remains the standard surgical approach for symptomatic Asherman syndrome, mechanical hysteroscopic tissue removal can achieve anatomical restoration without electrosurgical energy, but evidence specific to Asherman syndrome remains limited, postoperative intrauterine barriers and hormonal therapy are commonly used to reduce adhesion reformation, although their effect on subsequent live birth remains uncertain, pregnancies following treatment of Asherman syndrome require attention to the risk of abnormal placentation and other obstetric complications.

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REFERENCES

1. Di Guardo F, Della Corte L, Vilos GA, Carugno J, Török P, Giampaolino P, et al. Evaluation and treatment of infertile women with Asherman syndrome: an updated review focusing on the role of hysteroscopy. *Reprod Biomed Online.* 2020;41(1):55-61.
2. AAGL Elevating Gynecologic Surgery; European Society of Gynaecological Endoscopy. AAGL practice report: practice guidelines on intrauterine adhesions developed in collaboration with the European Society of Gynaecological Endoscopy (ESGE). *Gynecol Surg.* 2017;14:6.
3. Dreisler E, Kjer JJ. Asherman's syndrome: current perspectives on diagnosis and management. *Int J Womens Health.* 2019;11:191-8.
4. Hologic Inc. MyoSure hysteroscopic tissue removal system: instructions for use. 2026. Available at: https://www.hologic.com/sites/default/files/2018-02/MyoSure_Classic_TRD_IFU_0.pdf. Accessed on 26 August 2026.
5. Yong J, Wan Y, Ye M, Yi S, Zeng F, Sun X, et al. Comparative analysis of the clinical efficacy and reproductive outcomes of the hysteroscopic tissue removal system (MyoSure) and hysteroscopic electroresection in the treatment of benign intrauterine lesions. *Int J Gynaecol Obstet.* 2023;163(1):115-22.
6. Guo EJ, Chung JPW, Poon LCY, Li TC. Reproductive outcomes after surgical treatment of Asherman syndrome: a systematic review. *Best Pract Res Clin Obstet Gynaecol.* 2019;59:98-114.
7. Hanstede MMF, van der Meij E, Veersema S, Emanuel MH. Live births after Asherman syndrome treatment. *Fertil Steril.* 2021;116(4):1181-7.
8. Yamamoto N, Takeuchi R, Izuchi D, Yuge N, Miyazaki M, Yasunaga M, et al. Hysteroscopic adhesiolysis for patients with Asherman's syndrome: menstrual and fertility outcomes. *Reprod Med Biol.* 2013;12(4):159-66.
9. Harpham M, Abbott J. Use of a hysteroscopic morcellator to resect miscarriage in a woman with recurrent Asherman's syndrome. *J Minim Invasive Gynecol.* 2014;21(6):1118-20.
10. Kakinuma T, Kakinuma K, Matsuda Y, Ohwada M, Yanagida K. Successful live birth following hysteroscopic adhesiolysis under laparoscopic observation for Asherman's syndrome: a case report. *World J Clin Cases.* 2022;10(32):11949-54.

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