CASE REPORT

Hysteroscopic guided, laparoscopic excision of caesarean scar defect: video presentation of a combined technique

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Abstract

With increasing rates of delivery by caesarean section has come an increase in rates of associated complications, including caesarean scar defect. Whilst the management of this issue remains controversial, evidence is building for surgical management of such a defect for resolution of menstrual symptoms, pain and subfertility. We present a case report and surgical video of a hysteroscopic guided, laparoscopic excision of a caesarean scar defect. Following the successful management of this case and a literature review of the technique, we conclude this to be a safe, feasible and effective procedure with a low rate of complications.

INTRODUCTION

As rates of caesarean section increase worldwide, so do rates of associated complications. One such issue is caesarean scar defect (also known as isthmocoele, or niche), with a reported prevalence of between 24 and 70% following one caesarean section. Such a defect can be linked to abnormal uterine bleeding, pain and secondary infertility, as well as complications of pregnancy including caesarean scar rupture and caesarean scar ectopic pregnancy.

We present a case report, surgical video and technique for a hysteroscopic guided laparoscopic repair of caesarean scar defect for management of inter-menstrual bleeding, pain and secondary infertility.

METHODS

Case report and surgical video of a patient undergoing excision of caesarean scar defect in a centre in, Western Australia.

Consent was obtained from the patient for presentation and publication. Exemption was granted from the local institutional review board.

CASE REPORT

A 36-year-old gravida 2, para 2 presented with a three year history of recurrent inter-menstrual bleeding, pain and secondary infertility following her second caesarean section. Tertiary level ultrasound scan and saline infusion sonography demonstrated an 11 mm caesarean section scar niche. This was pre-operatively confirmed on hysteroscopy.

The patient elected to undergo a combined hysteroscopic guided laparoscopic excision of caesarean scar niche. The procedure and post-operative period were uneventful, and the patient was discharged home on Day 1 post-operative. At subsequent follow up, she described cessation of menstrual symptoms. As yet a successful pregnancy has not been achieved.
DESCRIPTION OF SURGICAL TECHNIQUE
Simultaneous laparoscopy and hysteroscopy were performed, and the caesarean scar defect was visualized. A colpotomiser was inserted, and the vesico-uterine space was developed by reflection of the bladder over the lip of the colpotomiser. The hysteroscope was then re-inserted. Given the thinning of myometrium in the area of the defect, the hysteroscopic light was able to be used to demarcate the limit of the defect, which was marked.

The defect was then excised laparoscopically and removed. Multilayer closure of the defect was performed, in two deep layers using continuous V-Loc 0, and a third superficial layer was closed using interrupted 0 monocryl. Haemostasis was ensured, and Oxiplex applied for prevention of adhesion formation. Repeat hysteroscopy was performed to confirm integrity of the repair. Obliteration of the previously visualized defect was noted.

DISCUSSION
Controversy exists regarding the significance, and treatment of, caesarean scar defect [1]. Hysteroscopy has historically been the most common route of repair, with more recent uptake of the laparoscopic approach. Both are reported to be effective for resolution of gynaecological symptoms and infertility, however, the laparoscopic approach is increasingly thought to be the superior method as it allows for complete visualization and excision of the defect, and for adequate multilayer closure following excision. Such a repair has potential to allow for increased myometrial thickness which may reduce the risk of caesarean scar complications in future pregnancies [2]. Hysteroscopic guidance further improves visualization of the defect prior to removal.

A review of the available evidence suggests that this is a safe and feasible procedure, with a low rate of complications, with an excellent reported rate of resolution of gynaecological symptoms. However, it must be noted that the overall quality of evidence for review is poor, and at this time there is insufficient evidence to demonstrate benefit for fertility outcomes [3].

CONCLUSION
Hysteroscopic guided, laparoscopic excision and repair of caesarean scar defect is a safe, feasible and effective procedure with a low rate of complications, however, further prospective research is warranted.

SUPPLEMENTARY MATERIAL
Supplementary material is available at the Journal of Surgical Case Reports online.

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CONFLICT OF INTEREST STATEMENT
None declared.

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