

# The Rendez-vous technique for treatment of caesarean scar defects: a novel combined endoscopic approach

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## Abstract

**Background** A caesarean scar defect is a late complication of caesarean birth with a wide range of prevalence between 56 and 84 % depending on which diagnostic tool and which definition is used [1]. The referred symptoms which include postmenstrual spotting and infertility are fortunately rare. Moreover, severe complications such as caesarean scar pregnancy and uterine rupture in the following pregnancy may occur. Given the increasing incidence of caesarean births, the potential morbidity associated with caesarean scars is likely to become more important. Recently, a few repair techniques were described in the literature including the hysteroscopic resection of scarred tissue or the laparoscopic repair with or without robotic assistance [2, 3].

**Methods** Between June 2009 and February 2014, 21 women with caesarean scar defects were operated with the Rendez-vous technique, a minimally invasive surgery combining the laparoscopic and hysteroscopic approach. Data were retrospectively collected. The indications for this surgery included secondary infertility, previous caesarean scar pregnancy, recurrent miscarriage and postmenstrual spotting. Prior to operation, a transvaginal

ultrasound was performed to examine the uterine wall defect.

**Results** The patient characteristics are provided in Table 1. In all cases, the operation was successfully completed laparoscopically. The median operation time was 125 min. One case was complicated by recurrence of the scar defect 6 weeks after the operation. No other intra- or post-operative complications were observed, and the median in-patient stay was 3 days.

**Conclusions** The benefits of the technique include the feasibility and safety of the procedure, the “Halloween sign” (Fig. 1) which indicates the exact extent and localization of the scar defect and the immediate assessment of repair through the hysteroscopy at the end of the surgery. However, before further studies evaluate the efficacy of this method, the routine repair of caesarean scar defects cannot be recommended. A video of the technique is presented.

**Keywords** Caesarean scar defect · Laparoscopy · Hysteroscopy · Rendez-vous technique

See Table 1 and Fig. 1.

**Electronic supplementary material** The online version of this article (doi:10.1007/s00464-015-4226-6) contains supplementary material, which is available to authorized users.

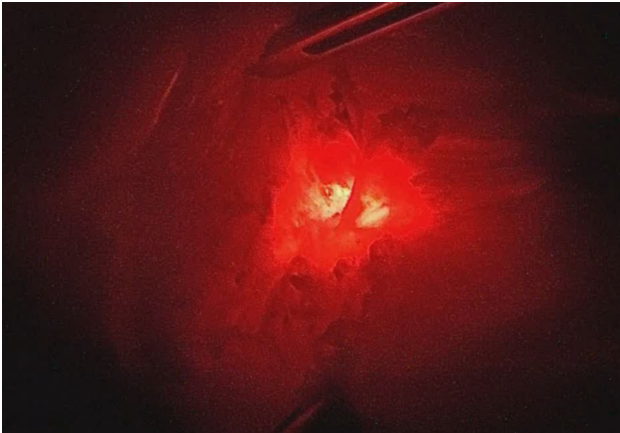
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**Table 1** Patient characteristics and indications for surgery (21 patients)

Age (years), median (range)	35 (25–41)
BMI (kg/m <sup>2</sup> ), median (range)	24 (18–43)
Secondary infertility, number (%)	13 (61.9)
Previous caesarean scar pregnancy, number (%)	3 (14.3)
Recurrent miscarriage, number (%)	1 (4.7)
Postmenstrual spotting, number (%)	3 (14.3)



**Fig. 1** Visualization of the scar defect during the laparoscopy while the hysteroscope with its *light* source is behind the defect (“Halloween sign”)

**Disclosures** Dr. Nirgianakis, Dr. Oehler and Dr. Mueller have no conflict of interest or financial ties to disclose.

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