

Successful pregnancy after microwave endometrial ablation: case report

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Abstract We present details of a 39-year-old para 3 woman, who was treated with microwave endometrial ablation (MEA) for menorrhagia after previous failed medical treatments. She then presented at 8 weeks after the procedure and was confirmed to have an 8-week viable intrauterine pregnancy. She was counselled, but, based on the fact that there was no published literature about the effects of MEA on pregnancy, she decided to have a medical termination and she subsequently got pregnant again and had a healthy baby girl. There was no complication in pregnancy and delivery.

Keywords Microwave endometrial ablation · MEA and successful pregnancy · Endometrial ablation and pregnancy · Pregnancy outcome after second-generation ablative technique

Case

We present details of a 39-year-old, para 3 woman, who was treated with microwave endometrial ablation (MEA, Microsulis plc, Hampshire, UK) for menorrhagia after previous failed medical treatments. At the time of treatment she was taking the progesterone-only pill and was given

gonadotropin-releasing hormone (GnRH) analogue for endometrial preparation; a single subcutaneous injection of Zoladex 3.6 mg (Astra Zeneca, UK) was administered. She had had a pre-operative hysteroscopy which had confirmed an enlarged cavity of 12 cm, with slightly thickened endometrium possibly a result of the progesterone-only pill she was on. The MEA treatment cycle lasted 6 min.

Although she was counselled for laparoscopic sterilisation she was not keen to have it on the day of the MEA. She then presented at 8 weeks after the procedure and was confirmed to have an 8-week viable intrauterine pregnancy. She was counselled, but based on the fact that there was no published literature about the effects of MEA on pregnancy, she decided to have a medical termination. This led to complete evacuation of the pregnancy, confirmed by histology. Repeat hysteroscopy and MEA was discussed, but she did not keep her outpatient appointment. She presented again 6 months after she had undergone the MEA, having had 2 months of amenorrhoea, and she had stopped using any form of contraception. A scan confirmed an 8-week intrauterine pregnancy (the second pregnancy after MEA). She was booked as a high-risk pregnancy in Consultant-led care and had an uneventful pregnancy, having regular growth scans. She was induced at term to reduce the risk of placental failure or insufficiency. Her labour lasted 43 min, with the third stage lasting only 9 min. A healthy girl with a birth weight of 3.08 kg was delivered, and mother and child were discharged 3 days after delivery.

Discussion

MEA utilises microwave power at a frequency of 9.2 GHz, applied to the endometrium to achieve a layer of tissue destruction usually about 3 mm deep. This leads to a quick

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and effective treatment for menorrhagia. It is thought the intensity of the microwave energy beyond 3 mm is negligible and that there is no penetration of microwaves through the myometrium and outside the uterus. MEA is one of the most widely used endometrial ablation techniques in the UK.

Recently, there have been reported cases of bowel injury [1], and there are increasing concerns among gynaecologist about unreported risks of thermal bowel injury from MEA compared with the other endometrial ablative techniques. The incidence of pregnancy after endometrial ablation is reported as 0.24–0.68% (range 0.125–0.967%), although pregnancies have been reported after other endometrial ablative [2] and resection techniques, with a significant number having adverse effects, and only a few progressing to successful outcome after adequate follow-up. There has been a reported case of pregnancy after MEA that was terminated medically [3]. Tulandi reported an island of untreated endometrium, in a prospective study of hysteroscopy before and after MEA [4]. These areas may represent sites for implantation of a pregnancy. It is difficult to determine whether our patient had this problem, due to her not attending for follow-up. Hare and Olah, in their review article, reported pregnancy is likely to occur if the menstrual flow returns to the pre-treatment pattern [5].

We have described the first case of successful pregnancy after this procedure (information from Microsulis, UK). Literature search revealed that there have been 70 pregnancies reported in the English literatures after endometrial ablation or resection, with 33% terminated, 21% miscarried and one ectopic. Thirty-two babies were born in 31 pregnancies to 30 mothers. They were two stillbirths and two early neonatal births, giving a perinatal mortality rate of 12.9%, with a reported 41% pre-term delivery rate (reducing to 31% without iatrogenic causes). Some authors reported a morbidly adherent placenta rate of 26% and caesarean section rate of 71% in these women [5].

There are two main issues for discussion. Firstly, the issue of pregnancy after MEA in the UK: this procedure is carried out in women who have completed their family. Hence, the use of adequate contraception should be emphasised. It is probably good practice to offer these women sterilisation on the day of MEA if they are not

practising effective long-acting alternative contraception already.

Pregnancy can cause a great dilemma from the point of view of deciding whether to keep the pregnancy or consider termination after adequate counselling. In this case, counselling was difficult, because there was no published clinical evidence to base our counselling on.

Secondly, as the number of MEAs done in the UK increases over time, obstetricians and gynaecologist will encounter more such pregnancies, and, using the available evidence, it will be necessary for them to counsel these patients during their decision-making. Although our case is the only reported case of pregnancy, importantly, it had a successful outcome with no adverse effect on the mother.

Conclusion

The number of endometrial ablations has increased in recent years in the UK. This case confirms that it is possible for a woman to conceive after having undergone MEA. Hence, it is important for these patients to be advised of this possibility and, if pregnancy does occur, for the available evidence to be used to counsel these patients. Although these pregnancies are unplanned, some patients may decide to continue with them, and successful outcome, with close monitoring during pregnancy, is possible.

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