

A successful term pregnancy after uterine artery embolisation for uterine fibroids

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ABSTRACT

Uterine fibroids are common and if large can cause problem with conception and also pregnancy. Most are asymptomatic. For symptomatic fibroids, myomectomy is the standard of treatment. Uterine artery embolisation (UAE) has been well known accepted as a non-surgical alternative treatment for symptomatic uterine fibroids. Successful pregnancy outcomes after UAE have been reported. However, its safety is still remained uncertain as studies showed that pregnancies after UAE are more likely to have adverse pregnancy outcomes. We report the case of a 28-year-old lady had a spontaneous conception two year after UAE. She delivered a term female healthy baby of 3.2 kg by caesarean section at around 38 week gestation, with the complication of primary post-partum haemorrhage.

Keywords: Uterine leiomyoma, fibroid, pregnancy, embolotherapy, therapeutic embolisation

INTRODUCTION

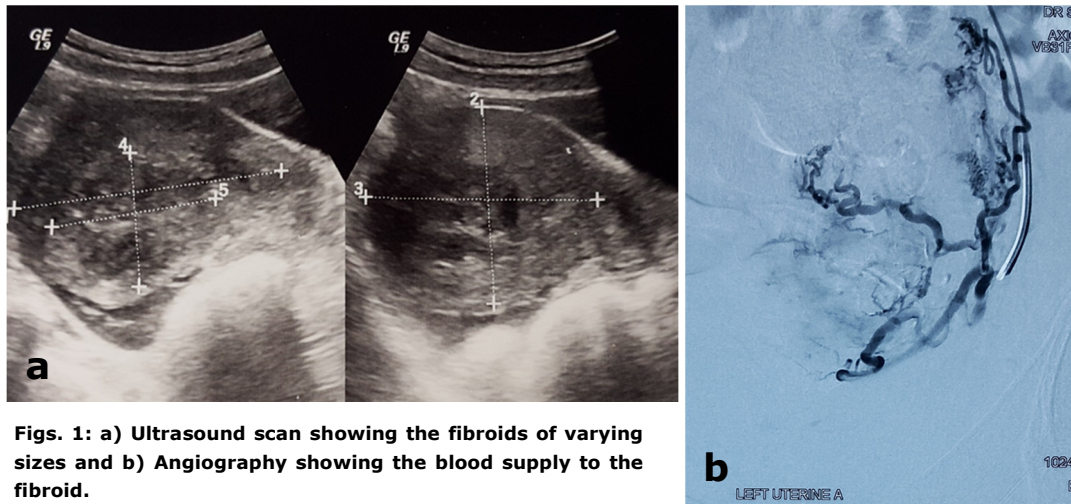
Uterine fibroids are the most common benign tumour of uterus presenting in up to 25% of women of reproductive age.³ For those women who wish to maintain their fertility, myomectomy is the single conventional option for symptomatic fibroids. However, myomectomy is associated with risks of infection, bleeding, adhesion formations and even proceeding to hysterectomy. Uterine artery embolisation (UAE) as another option that is gaining acceptance. UAE has been reported as an effective alternative treatment to hysterectomy/myomectomy for symptomatic fibroids especially for those who wish to retain their uter-

us.⁴ However, its safety profile remain uncertain as studies shown that pregnancies after UAE are more likely to have adverse pregnancy outcomes of miscarriages, abnormal placentation, abnormal lie, and risks of having caesarean section, and caesarean hysterectomy, massive postpartum haemorrhage (PPH), etc.^{1,2} The relative effects of UAE and myomectomy on fertility and pregnancy outcomes is still unknown though successful pregnancy is possible after UAE. Successful pregnancy has been reported.^{6,7} We present a case of successful spontaneous pregnancy and delivered a healthy baby in a 28-year-old Bruneian woman who had UAE treatment.

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CASE REPORT

A 28-year-old Malay lady was first admitted in Oct 2010 with anaemia level with history of



Figs. 1: a) Ultrasound scan showing the fibroids of varying sizes and b) Angiography showing the blood supply to the fibroid.

menorrhagia, dysmenorrhoea, and infertility of two years duration. An ultrasound scan of the pelvis revealed an enlarged and retroverted uterus of 10.74 cm x 6.8 cm, with a mixed echogenic multiple fibroids in the body and fundus. Subsequent Hysteroscopy found that the uterine cavity was filled with multiple sub-mucous fibroids (six in total numbers) with different sizes ranging from 2 x 1 to 3 x 2 cm, however both ostia were seen without any obstruction of fibroids and the rest of endometrial cavity appeared normal. Laparoscopy and dye test showed 10 week size retroverted uterus with flimsy adhesions and cystic jelly like materials adhered to the uterine serosa. Both tubes and ovaries looked normal and dye test performed confirmed that both tubes were patent.

After investigation, the patient was treated with three doses of GNRH analogue in 2011, however menorrhagia did not relieved resulting in critically low haemoglobin level of 4.2 gm/dL. The size of the uterus also did not significantly changed after GNRH treatment, showing 9.6 x 8.2 cm uterus with multiple

fibroids ranging 2.9 x 3.2 to 2.3 x 2.6 cm based on a repeat USS in April 2012.

After discussion, an UAE was done in May 2012. About one month later, degenerated sub mucous fibroids passed out vaginally for 3 times followed by normal menstruation. Subsequently ovulation induction was started in January 2013 for 6 cycles. In August 2013, her first clomiphene induced pregnancy was diagnosed as PUL (pregnancy of unknown location) at 8 week gestation; later on methotrexate injection was given for suboptimal rise in BHCG. One year later in August 2014, she conceived spontaneously and came back with seven week amenorrhoea, confirming by ultrasound that there was single viable pregnancy. Early Ultrasound scan at 14 week gestation showed multiple small fibroid with one at the lower cervical region of 4.1 x 3.8 cm. Her pregnancy went well and in March 2014, at her age of 30, she delivered a female alive baby of 3.2 kg by an elective caesarean section done at around 38 week gestation for lower segment fibroids. During the operation, multiple sub mucosal fibroids felt in the uter-

ine cavity and 3x3 cm posterior wall fibroid was protruding into the uterine cavity at lower uterine segment, which was avulsed during operations, no active bleeding from the base. There was an immediate PPH with estimated total blood loss of 1,000 ml during the operation. Her postnatal follow up was uneventful.

DISCUSSION

It has been globally accepted that UAE is an effective alternative treatment for symptomatic uterine fibroids. For patients who wish to retain fertility, it is good option. Successful pregnancies after this procedure have been reported. However, there is currently a very limited information on the exact figures available on the chance of having successful pregnancies among women after UAE for uterine fibroids. A retrospective study of 187 uterine fibroid cases treated with UAE concluded that UAE may be appropriate in younger women who wish to preserve their fertility. ⁸

Like all treatment, there are complications. One study found a significant increase in caesarean section deliveries, and increases in preterm deliveries, post-partum hemorrhages and miscarriage that were associated with lower pregnancy rates after UAE treatment. ⁹ A thorough and extensive explanation is advisable to those who are going for UAE contemplating future pregnancies regarding; a) major risks and complications of UAE itself to go for as an intervention; b) Its uncertainty and lack of data in chance of having successful pregnancy outcomes after UAE and; c) adverse pregnancy outcomes after UAE. Further studies regarding the pregnancy outcomes and complications after UAE in compared to myomectomy in a younger population are necessary.

In our case, the patient had failed hormonal treatment and after considering the risks and the possible complications, we proceeded with UAE. The fibroids reduced in size and the patient passed necrosed fibroids and subsequently had a spontaneous conception. Close monitoring during pregnancy did not show any complication.

In conclusion, we report the first case of spontaneous successful conception in a patient treated with UAE for multiple large uterine fibroids. This case serve to highlight that this option can be considered for treatment of uterine fibroids.

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REFERENCES

- 1:** Goldberg J, Pereira L, Berghella V. Pregnancy after uterine artery embolization. *Obstet Gynaecol* 2002; 100:869-72.
- 2:** Goldberg J, Pereira L, Berghella V, et al. Pregnancy outcomes after treatment for fibromyomata: Uterine Artery Embolization versus laparoscopic myomectomy. *Am J Obstet Gynaecol* 2004; 191:18-21.
- 3:** Vollenhoven B. The epidemiology of uterine leiomyomas. *Bailliere's Clin Obstet Gynaecol.* 1198; 12:169-76.
- 4:** Firouznia K, Ghanaati H, Jalali AH, Shakiba M. Uterine artery embolization for treatment of symptomatic fibroids: a review of the evidence. *Iran Red Crescent Med J.* 2013; 15:e16699.
- 5:** Hayden Homer, Ertan Saridogan. Review on pregnancy outcomes after Uterine Artery Embolization (UAE). *The Obstetrician & Gynaecologist.* 2009; 11:265-270.
- 6:** Balghari ZK, Chow N, Comi N, Antooniou

AV. Successful spontaneous pregnancy and delivery following myomectomy and uterine embolization (UAE) - Case report. Middle East Fertility Society Journal. 2011; 16:90-2.

7: Lopes HI, Sa MI, Rodriues RM. Pregnancy after uterine artery embolization: A Case report in a woman with leiomyomata. Case Rep Obstet Gynecol. 2015;2015:235312

8: Bonduki CE, Feldner Jr PC, Silva Jd, Castro RA, Sartori MG, Girão MJ. Pregnancy after uterine arterial embolization. Clinics (Sao Paulo). 2011; 66:807-10.

9: Walker WJ, McDowell SJ. Pregnancy after uterine artery embolization for leiomyomata: a series of 56 complicated pregnancies. AM J Obstet Gynaecol. 2006; 195:1266-71.
