

# Managing pregnancy after miomectomy in early pregnancy

**Keywords:** transmural, myoma, laparoscopic, pregnancy

## Case report

A 39-year-old woman was referred to the University Medical Centre Ljubljana for laparoscopic myomectomy of a 6 cm intramural myoma with a history of increased urinary frequency and urgency. There was also a 1-year history of infertility. The laparoscopy was scheduled on the 23<sup>rd</sup> day of the regular cycle; myoma of the posterior wall was removed using a harmonic scalpel. The endometrium was gently removed from the myoma without opening the uterine cavity. The vertical incision of the posterior wall was sutured in one layer (full thickness) using size 0 polydioxanone (PDS) resorbable sutures without bipolar electricity for haemostasis. Performed perturbation confirmed the patency of the left tube but not the right one, despite its normal appearance. The patient was advised to plan pregnancy after 6 months and deliver with caesarean section.

On postoperative day 24, the patient was admitted to the emergency for nausea and vomiting. Ultrasound confirmed an intrauterine pregnancy of 7 weeks. Placenta was on the posterior wall over the scar where a 3cm seroma was seen (Figure 1). Since she declined abortion, pregnancy was closely followed up with ultrasound controls, resting was advised and daily 500mg of vitamin C, folic acid and iron were recommended. At 16 weeks, additional progesterone was prescribed (Estima GE 200mg 3 times daily) and regular defecation advice was offered to minimise possible abdominal contractions. The patient was instructed to immediately report to the emergency in case of abdominal pain due to a risk of uterine rupture. Emergency doctors were informed about her situation.



**Figure 1** Posterior wall of uterus with 3cm seroma.

Serial scans revealed satisfactory foetal growth and stable 2.5cm seroma in the posterior wall with 5-10mm myometrium on each side. The pregnancy was uneventful until week 32, when the patient developed tonisations and was admitted to our hospital where 14mg of betamethasone was administered. After 5 days, caesarean section was performed due to non-reassuring foetal heart rate, breech presentation

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and a history of myomectomy. Posterior wall revealed an area of 2x2cm of thin myometrium. A 1.6kg boy with Apgar scores of 8 and 9 at 1 and 5min, respectively, and an umbilical artery pH 7.30, was delivered. The baby was admitted to the neonatal ICU only due to prematurity and was discharged after 17 days.

## Discussion

The uterine wound healing process after abdominal myomectomy is complete in 12 weeks in the absence of hematoma or edema formation in the myometrium, with recommendations for the conception interval ranging from three to six months.<sup>1</sup> The incidence of uterine rupture during subsequent pregnancy following myomectomy with safe healing interval is rare and varies between 0% and 1.2%.<sup>2-5</sup> Koo et al.<sup>6</sup> reported only 0.6% cases of uterine rupture during pregnancy, with a mean interval between myomectomy and pregnancy of 14 months.<sup>6</sup>

To our knowledge, this is the first case report with no interval between laparoscopic intramural myomectomy and pregnancy. The laparoscopic intramural myomectomy was probably performed at the time of implantation or soon after. Since the patient declined abortion, prenatal care was carefully monitored. Vitamin C—an essential micronutrient for wound healing contributing to collagen synthesis and angiogenesis—was administered to optimise the healing process.<sup>7</sup> Progesterone was given to minimise contractions and regular defecation advice was offered to minimise the risk of uterine rupture. Cooperation with the patient was crucial. She was highly educated, aware of the situation and risks, had taken notifications and contact numbers, and lived 8 km from the hospital where the emergency team was informed of her situation. Weekly ultrasound examinations were performed.

When confronted with early pregnancy following myomectomy, the decision on how long to proceed with the pregnancy should weigh the relative risks for mother and child. Pistofidis reported 7 cases of uterine rupture after laparoscopic myomectomy; 6/7 occurred after 34 weeks of gestation and one at delivery.<sup>8</sup> Dubuisson reported a 1.0% incidence of uterine rupture at week 32,<sup>4</sup> and Sizzi a 0.26% incidence at week 33.<sup>5</sup> Parker analysed 19 cases of uterine ruptures after laparoscopic myomectomy that occurred between weeks 17 and 40 of gestation (M=31 weeks).<sup>9</sup> In our case, placenta was positioned

over the postmyomectomy scar with seroma and a very thin layer of myometrium. We planned a caesarean section at week 34, but a non-reassuring foetal heart rate forced us to perform it two weeks earlier.

## Conclusion

A well sutured myometrium without the use of bipolar electricity for haemostasis and placenta covering the scar perhaps contributed to the uterus withstanding growing pregnancy pressure. Additionally, all known preventive measures to enhance healing and relax the uterus were advised for the high-risk pregnancy to have a successful outcome.

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## Conflicts of interest

The authors declare no conflicts of interest.

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