ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 01 | January - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

SURGICAL REMOVAL OF A LARGE FIBROID DURING PREGNANCY: A CASE REPORT

Anaesthesiology

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ABSTRACT

Antenatal myomectomy is usually avoided owing to the fear of complications such as miscarriage, damage to the growing foetus due to direct trauma during surgery or due to the drugs that are being used during perioperative period, postoperative complications such as uncontrolled haemorrhage, which may require caesarean hysterectomy, etc. However, if surgery is unavoidable due to various reasons such as intrauterine growth retardation, severe pain, etc., it is usually performed in the second trimester. We report a case of successful antenatal myomectomy during the 20th week of pregnancy. A 29-year-old primigravida presented to the outpatient department of obstetrics and gynaecology in the People's College of Medical Sciences and Research Centre, Bhopal, with chief complaint of abdominal pain with a history of amenorrhoea for 5 months with uterine fibroid. She is a known case of hypothyroidism. No other significant history was elicited. Ultrasonography revealed a large subserous fibroid measuring 22.7 mm×22.8 mm×16.4 mm over the right posterior aspect of uterine fundus. Antenatal myomectomy was performed successfully without any complications, and pregnancy continued until 38 weeks when a caesarean section was performed. The literature states that surgical intervention is beneficial in well-selected patients

KEYWORDS

antenatal myomectomy, fibroid, uterine fibroid, surgery during pregnancy

INTRODUCTION:

Fibroids are the most common benign tumours of the uterus usually found in women of childbearing age. The incidence of uterine fibroids is 40–60% and 70–80% by the age of 35 and 50, respectively[1]. Moreover, a study conducted by Laughlinand colleagues in the USA stated that there are some differences in the incidence of the uterine fibroid in different races; in African–American women the incidence of uterine fibroid is 60% by the age of 35 and it increases up to more than 80% by the age of 50, whereas the incidence of uterine fibroid in White women is 40% by the age of 35 and it increases up to 70% by the age of 50.9[2]. Most of the literature states that the true incidence of uterine fibroid during pregnancy is not yet known, but according to the reports it may vary from 0.1 to 12.5%. The presence of fibroids in the uterus during pregnancy may develop various problems, such as abdominal pain, abortion, abnormal foetus presentation, difficulty in delivering baby, etc., and affect the process of pregnancy. In addition to that there are some other factors also that affect normal pregnancy − namely, size, position, number of fibroids and their relation with the placenta[3]. When such parturient come to the anaesthesiologist for myomectomy, the main challenge placed before the anaesthesiologist would be to perform successful myomectomy without any complications that may affect the progress of pregnancy and its outcome. Studies state that usually fibroids do not present any symptoms during the antepartum period. However, occasionally they may cause some obstetric complications in 10% of parturient, but it depends upon the size, position and number. In current scenario, the occurrence of fibroid in pregnancy is not uncommon. This may be attributed to the increasing trend of delayed conception. Hence, it is important to understand the characteristics, symptoms, complications and the management modalities of the fibroid during pregnancy in current clinical practice for the successful outcome of the parturient[4].

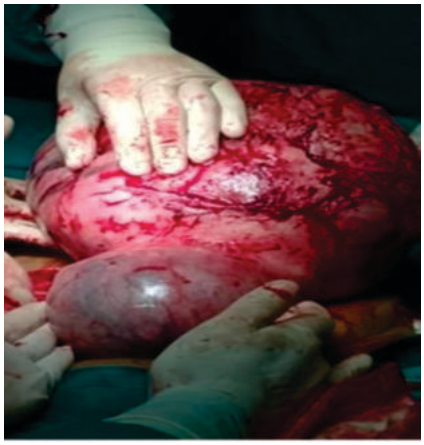
Case Report

On 26th February 2015 a 29-year-old primigravida presented to the outpatient department of obstetrics and gynaecology at people's college of medical sciences and research centre, Bhopal, with the chief complaint of abdominal pain with a history of amenorrhoea for 5 months with uterine fibroid. She was a known case of hypothyroidism and she had been on thyroxin 50 µg for 1 year. In her family history, she told her mother was a diabetic patient. There was no history of hypertension, diabetes mellitus, tuberculosis, bronchial asthma, bleeding disorders, drug allergy, addiction, seizure disorder, etc. On general examination she was thin built. Per abdominal examination revealed an abdomen size commensurate with 36 week's gestation. Vital parameters recorded were as follows: pulse rate was 80/min; blood pressure was 100/70mmHg; respiratory rate was 18/ min; and patient was afebrile. Laboratory investigations revealed the following: Hb 8.3g %, TLC 16×109 /cumm and platelet count 5.28×109.

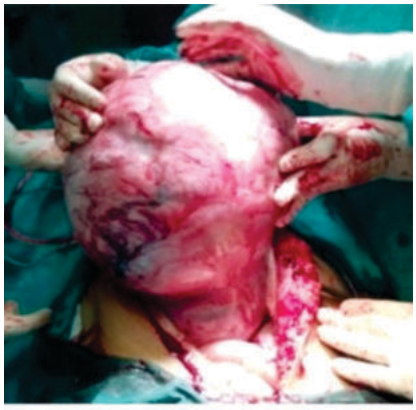
Considering the increase in symptoms due to organ compression and the level after extensive counselling, a myomectomy had been planned. As the fibroid size was very large, according to the location of the myoma open surgery was planned by the obstetrician. After a complete pre-anaesthetic evaluation, fitness for surgery was confirmed by the Anaesthesiologist. The patient was admitted in the hospital. Patient was kept nil by mouth for 6 h. As the patient was a known case of hypothyroidism, 50 µg of thyroxin tablet was given with a sip of water. After complete preoperative preparation of the patient and obtaining written informed consent for anaesthesia and surgery, patient was shifted to the operation theatre. Multiparameter monitor (non-invasive blood pressure, ECG, pulse oximeter and $ETCO_2$) was attached to the patient.

A 15 cm wedge was placed under the right hip of the patient and a secure intravenous line with Ringer lactate solution was started. After the discussion with the obstetrician regarding surgical procedure we planned general anaesthesia. Premeditation administered was intravenous glycopyrrolate 0.2 mg, intravenous midazolam 2 mg, intravenous fentanyl 100 mg, intravenous ranitidine 50 mg and intravenous ondansetron 4 mg. Preoxygenation was done with 100% O2 for 5 min. Rapid sequence induction was done while giving intravenous propofol 100 mg, and intravenous succinyl choline 75 mg was given after induction. Intermittent positive pressure ventilation was performed for 1 min with 100% O2 via Bains circuit and then patient was intubated with size 7 cuffed endotracheal tube after laryngoscopy. Anaesthesia was maintained on N2O+O2 in 60 : 40 ratio plus Isofluorane plus intravenous Vecuroniun 3+1+1+1=6 mg. Isoxsuprine infusion was started 15 min before surgery and continued 6 h after the surgery to prevent abdominal cramps and any chance of miscarriage. ECG, SPO_2, pulse and $ETCO_2$ monitoring was carried out with multiparameter monitor continuously throughout the surgery. Blood pressure monitoring was carried out every 3 min until the fibroid was removed and then every 5 min until the procedure was completed

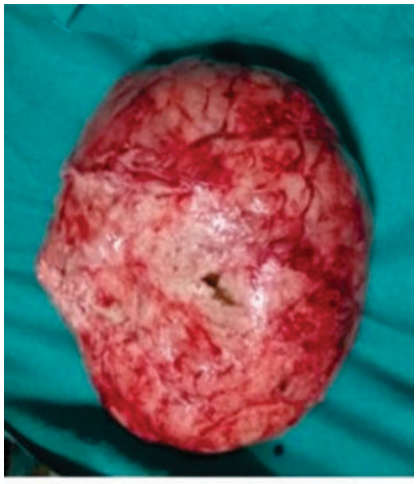
Estimated blood loss was 400 ml. Total duration of surgery was 150 min. Surgery was uneventful except for some episodes of hypotension. Blood pressure reduced to 20–30% from the baseline value three times during the whole procedure because of mechanical pressure of the gravid uterus and while the obstetrician was removing the fibroid from the uterus. Intravenous infusion of 1000 g paracetamol was given 15 min before surgery for pre-emptive analgesia and continued 4 times in a day for 3 days after surgery for postoperative pain relief. After the procedure, the patient was shifted to the recovery room for 24 h and then shifted to the obstetric ward. The foetus was under ultrasonographic observation for 10 days after the procedure. The patient was discharged on the 10th postoperative day.



Uterus with large Fibroid



Uterus with Fibroid



Uterine Fibroid

The patient was followed up with ultrasound and physical examination every four weeks until the delivery of the baby. Physiological foetal growth and an uneventful antenatal period were reported until 38 weeks of gestation when a caesarean section was performed. Labour pain was precipitated at 38 weeks. The patient delivered a healthy female baby weighing 2.8 Kg. The maternal haemoglobin level 2 days after caesarean section was 8.5 g/dl. The mother and the baby were discharged from the hospital on the 12th day after the caesarean section. The 6-week postnatal visit was normal without any problem with the mother or baby.

DISCUSSION

Antenatal myomectomy is usually avoided during an ongoing pregnancy owing to the risk for miscarriage and haemorrhage. However, if surgery is unavoidable, it is better to perform during the second trimester to minimize the risks with caesarean section at the end of the pregnancy.

Surgery during the antenatal period is complicated due to the requirements of balanced anaesthesia for the two lives simultaneously. Surgery during antenatal period is generally performed when it is unavoidable for the well-being of the mother, the foetus, or both. Although the literature suggests that the result of the antenatal surgeries is usually positive, it is also states that all general anaesthetic drugs cross the placental barrier. Thus, our primary aim should be to avoid polypharmacy, and the other option is to induce regional anaesthesia when it is justified according to the clinical status of the patients as well as medicolegal point of view.[5]

A few studies say that antenatal myomectomy is justified in women with subserosal or pedunculated fibroids and severe pain, which is refractory to medical treatment, and parturient who are in the first or second trimester of pregnancy.[6]

In our case, open surgical approach had been chosen because of the large size, pedunculated base and location of the myoma.

Although an open approach for antenatal myomectomy is infrequently reported, our experience suggests that it would be successful in selective cases, depending on the size, type and position of the fibroids.

CONCLUSION

We believe that, our experience provides reassurance for pregnant women with uterine myomas: the surgical management of uterine myomas during pregnancy can be successfully performed by expert surgeons on a case by-case basis. Myomectomy during pregnancy should be performed only if it is unavoidable. In selected patients it could prevent miscarriage or an unacceptable obstetrical outcome. The surgical approach should be tailored according to the patient and characteristics of the myoma. Clearly, an expert surgical and Anaesthesiologists team is essential to reduce risk for complications. Further investigation is needed to improve and define the better safety measures and feasibility of laparotomic myomectomy during pregnancy.

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