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Case Report

Cesarean Myomectomy and its Associated Complications: A Case Report

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Abstract

Background: Leiomyoma or uterine fibroids are the commonest benign tumors of the uterus. Fibroids co-exist with pregnancy and a prevalence of 20% - 30% has been reported in Nigeria. With increasing incidence of delayed child bearing in advancing age, there have been rising trends of pregnancy complicated by fibroids.

Cesarean myomectomy is the surgical removal of fibroids during cesarean section. It was previously a dreaded surgery, because of associated complications like excessive hemorrhage, potential hysterectomy, prolonged surgery time and increased post-op morbidity.

Currently, many studies have noted successful cesarean myomectomies, in carefully selected patients and being done by experienced obstetricians.

Case Report: This is the case report of a 34 years old primigravida, who had a huge co-existing uterine fibroid. She had a cesarean myomectomy at 37 weeks gestation. She was delivered of a live female baby, birth weight 2.5 kg, Apgar score 8 in one minute. The huge sub serous fibroid that was also removed had a dimension of 22 cm X 18 cm X 8 cm and weighed 4.5 kg.

The associated complication was acute kidney injury, secondary to massive blood loss, that was not replaced immediately. Other complications were prolonged surgery time and increased post-operative morbidity.

The Nephrologist co-managed her. She had 3 sessions of dialysis, a total of six units of blood transfusions. She was also co-managed by the anaesthetic and haematology teams.

She was discharged home twelve days later in good condition with her baby.

Conclusion: Cesarean myomectomy is feasible and can be done successfully by experienced obstetricians. Case selection is important, with multidisciplinary management.

Acute kidney injury can occur as a result of massive bleeding, following cesarean myomectomy.

Keywords: *Cesarean; Myomectomy; Complications; Kidney Injury; Multidisciplinary*

Introduction

Leiomyoma, also known as uterine fibroids are the most common benign tumors of the uterus.

Fibroids co-exist with pregnancy in 1.6% to 16.7% generally. In Nigeria, prevalence of 20% - 30% has been reported in previous studies.

With increasing incidence of delayed childbearing in advancing age, there have been rising trends of pregnancy complicated by fibroids.

Moreover, the increase in the rate of cesarean section (CS) has also led to increased confrontation of myomas during CS by obstetricians.

Removal of myoma during CS is controversial, as there is lack of consensus. Fear of excessive bleeding, possibility of potential hysterectomy, prolonged surgery time and increased post-operative morbidity, were the reasons for avoiding cesarean myomectomy.

It was suggested that another surgery 3-6 months after delivery (when uterus would have involuted) can be done to remove the fibroids. This will allow shrinkage of the myoma, lowering the operating time and reducing blood loss.

Currently, many studies on cesarean myomectomy (CM) are being published, validating its safety, without any significant complications. CM may be considered a safe option in carefully selected cases like pedunculated, subserous, or fibroids occupying the lower uterine segment, obstructing the delivery of the fetus. It should be done by an experienced obstetrician, with appropriate technique and advancement in anaesthesia. Thus, the patient is saved from future morbidity due to multiple surgeries, anaesthetic complications and out of pocket expenditure.

Aim of the Study

The aim of this report was to highlight a rare complication of cesarean myomectomy, that has not been mentioned in previous studies on this subject.

Case Presentation

Clinical history

Mrs M.O was a 34 years old primigravida who has been married for 3 years. Her conception was spontaneous. She presented for antenatal care in our facility at 22 weeks gestation. Pregnancy had been uneventful and no history of any associated medical disorder.

Clinical examination

She was a healthy looking young lady, afebrile, not pale, anicteric, with no pedal edema, her chest was clinically clear, Pulse was 92 beats per minute, and her blood pressure was 110/70 mmHg. Heart sounds were 1 and 11 only. Her abdomen was enlarged with a fundal height equivalent to 32 weeks gestation. There was a firm abdominal mass above her umbilicus. An abdomino-pelvic ultrasound scan revealed a huge fundal, subserous uterine fibroid and a live intra uterine gestation at 22 weeks. Other investigations done were all normal, except for blood urea that was on the high side of normal i.e. 6.3 mmol/L (normal range 1.5 - 6.6 mmol/L).

Antenatal visits

Her antenatal visits were 4 weekly, until 28 weeks, then 2 weekly until 36 weeks.

At 36 weeks, she complained of difficulty in sleeping and restlessness due to the huge size of her abdomen. There was no associated breathlessness or cough.

A repeat ultrasound scan noted a live female fetus, in oblique lie at 36 weeks gestation. A huge subserous fibroid with a wide stalk attached to the uterine fundus. Two small nodules occupied the lower uterine segment. She was counseled for elective CS, as mode of delivery [13].

She was admitted to antenatal ward. She signed a written consent for CS, but also requested for a cesarean myomectomy (CM). She was counseled that the final decision for CM will be in theatre, depending on what is seen.

Her packed cell volume was 33%. Two units of cross matched blood was provided.

She was reviewed by the anaesthetist and haematologist. All other pre-operative investigations were normal.

Treatment

At 37 weeks, cesarean section was done for delivery of her baby. A midline sub umbilical incision was made on her abdomen, which was extended laterally above the umbilicus. for easy access (Figure 1). A transverse suprapubic incision was made on the uterus. A live female baby, birth weight 2.5 kg, Apgar score 8 in one minute, was delivered after some difficulty due to 2 fibroid nodules (3 cm X 2 cm X 2.5 cm) occupying the incision site (Figure 2). The fibroid nodules were enucleated, baby and placenta delivered, the fibroid cavities obliterated using vicryl 2 sutures. The anesthetist added 30iu oxytocin to the intra-venous infusion. The midline incision was extended cephalad.

Figure 1: *Before surgery.*

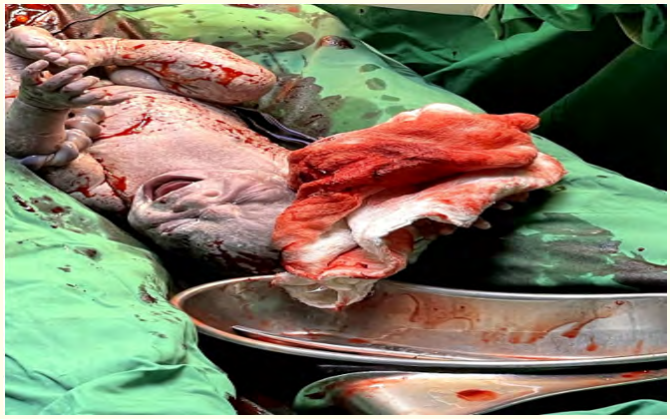

Figure 2: *Delivery of baby.*

The uterus was exteriorized and a tourniquet applied to the utero cervical junction.

A wide stalk, about 3 cm X 2 cm was connecting a huge fibroid to the uterine fundus. Fibroid was excised after double clamping the stalk, separating adhesions and maintaining hemostasis as much as possible (Figure 3). The fibroid was 22 cm X 18 cm X 8 cm and weighed 4.5 kg (Figure 4).

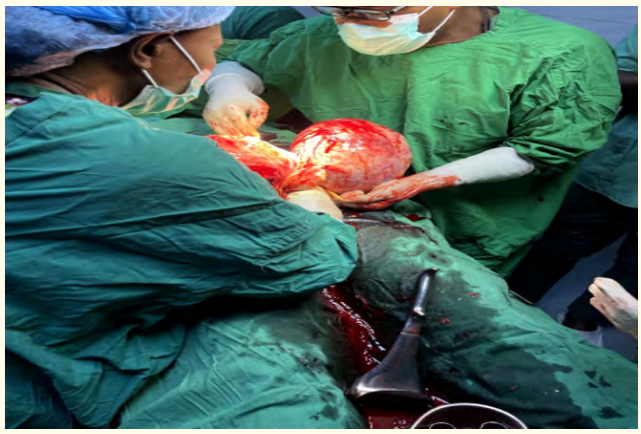

Figure 3: *Dissecting the huge fibroid from the uterine fundus.*

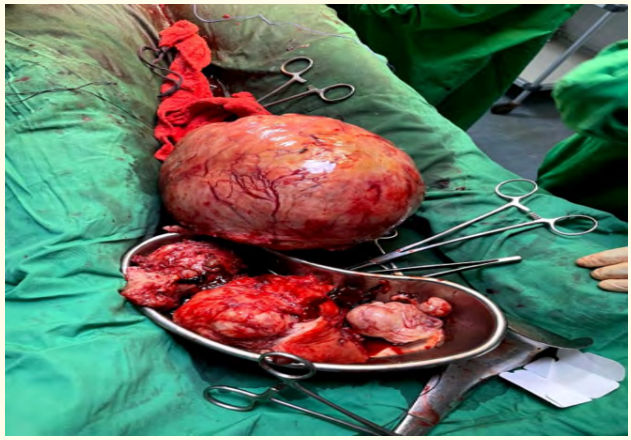

Figure 4: *Fibroid nodules after cesarean myomectomy.*

Intravenous carbetocin 100 mcg was given by the anesthetist. A Purse-string hemostatic suture [4] was applied to the utero-cervical junction, after removal of the tourniquet. Hemostasis was maintained and uterus returned into the peritoneal cavity. Abdominal wall was closed in layers, leaving a drain in the peritoneal cavity.

Surgery lasted for 1 hour 50 minutes, estimated blood loss was 1.4 liters.

She had a total of 2 units of blood transfused intra-operatively. She was commenced on intravenous Dextrose saline, IV analgesics and IV antibiotics. Fluid input and output chart was commenced. Her immediate post-operative period was uneventful.

Post-operative management

On first post-operative day, urine output was inadequate, and was concentrated. Two liters of normal saline were given to her fast, and her kidneys were challenged with intra venous Frusemide 80 mg stat.

On 2nd post-operative day, urine output was still inadequate. Post op PCV was 22%. Electrolytes were within normal, but blood urea was elevated, 25 mmol/l. The nephrologist reviewed, and made a diagnosis of acute renal injury (AKI) secondary to hypovolemic shock. She was transfused one unit of blood and she had dialysis.

She had a total of 3 sessions of dialysis, before she was discharged home. Each session was accompanied by blood transfusion. She was on admission for 12 days and was in good clinical condition before her discharge.

Follow up visit

She came for follow up after 2 weeks. Fluid intake and output was adequate. Blood Urea was 5.8 mmol/L. Packed cell volume was 30%. She was to see the nephrologist the next day, and to see us again at 6 weeks.

Discussion

Cesarean myomectomy (CM) until recently, was a dreaded surgery. It was believed that because of increased vascularity in a pregnant uterus, there will be increased blood loss, increased operative time, potential hysterectomy and increased post-op morbidity.

However, with the advent of newer techniques of selective devascularization, advances in anaesthetic technology, multidisciplinary management of patients, many experienced obstetricians now do CM.

Mrs M.O would have had an elective CS, then come back in 3-6 month‘s time for a myomectomy. The two surgeries were merged into one, thus preventing repeated exposure to anesthesia and its associated risks, reducing the cost implications for the patient and family disruptions.

The large fibroid in this case report weighed 4.5 kg (Figure 4), nearly double the weight of the baby (2.5 kg). The large fibroid contained a large pool of the patient’s blood. Sudden removal of the huge fibroid, in addition to delivery of the baby and placenta, resulted in a sudden drop of her circulating blood volume, poor perfusion of her vital organs, including her kidneys. This resulted in acute kidney injury.

The multidisciplinary management of this case contributed to the successful outcome. The nephrologists co-managed from her second post-operative day, and helped to restore the kidney function.

There is need for proper patient selection, before doing CM. The complications associated with CM, depends on the size of the fibroids, the number of the fibroid seen at surgery and their location. Sometimes fibroids obstruct access to delivery of the fetus, in the lower uterine segment, as was seen in this case. CM need to be done for such cases, to allow delivery.

Studies have shown that myomectomy at CS, is not as dangerous as has been traditionally thought and taught [1-3,5].

Enucleation is easier, as the tissues become softer during pregnancy. Bhatla., *et al*. [5] performed successful myomectomy in a 2nd trimester for a huge subserous fibroid, weighing 3.9 kg, and the pregnancy continued till term.

The patient should be counseled that myomectomy is feasible and the final decision is taken on the operating table, depending on what is seen by the surgeon [1,2]. This was what happened in the case of Mrs M.O.

Intramural myomectomy should be performed with caution. If placenta is attached below the fibroid base, myomectomy should be avoided for the fear of uncontrollable hemorrhage. During CM, all efforts should be made to reduce hemorrhage. In this case, increase in the dose of oxytocin by the anaesthetist, administration of Carbetocin, application of tourniquet intra-operatively, and application of Purse-String haemostatic sutures [4], were all measures taken to reduce blood loss. There was Increase in surgery time, as was in this case. This long exposure of the tissues, predisposes to post-operative infections. This was not the case with Mrs M.O. The broad spectrum antibiotics gave adequate protection.

In their large study, Song., *et al*. [9], reported that there was a drop in haemoglobin and longer time taken during CM, compared to CS only [9].

The massive blood loss (pooled blood within the huge fibroid, plus intra-operative blood loss of 1.4 liters) was not adequately replaced in the immediate post-operative period. This led to the acute kidney injury. This was the learning curve for us in this case.

Fertility performance and pregnancy outcome after cesarean myomectomy have been investigated by Adesiyun., *et al*. [12]. They suggested that the future fertility and or subsequent pregnancy outcomes in patients were not affected by cesarean myomectomy [12].

Conclusion

Acute kidney injury (AKI) can be a complication of CM, in situations where massive blood loss is not immediately replaced adequately.

Though cesarean myomectomy is feasible, a lot of studies are still ongoing. The complications are case-specific, and are yet inexhaustible.

Conflict of Interest

There are no conflicts of interest.

Acknowledgement

I wish to acknowledge Mrs M,O for giving her consent for this case report. I also wish to acknowledge the multi-disciplinary team that ensured the successful outcome of this case.

Bibliography

1. Radmila S., *et al*. "Cesarean myomectomy trends and controversies: an appraisal". *Journal of Materno-Fetal Medicine* 30.9 (2017): 1114-1123.
2. Ghaemmaghian F., *et al*. "Successful myomectomy during cesarean section". *International Journal of Biomedical Science* 13.2 (2017): 119-121.
3. Park BJ and Kim YW. "Safety of cesarean myomectomy". *Journal of Obstetrics and Gynaecology Research* 35.5 (2009): 906-911.
4. Iwo-Amah RS., *et al*. "Purse-string compression sutures at cesarean section: Its role in prevention of primary post partum hemorrhage (PPH)". *Tropical Journal of Obstetrics and Gynaecology* 38.1 (2021): 46-50.
5. Bhatla N., *et al*. "Myomectomy during pregnancy: A feasible option". *Journal of Obstetrics and Gynaecology Research* 35.1 (2009): 173-175.
6. Garg P and Bansal R. "Cesarean myomectomy: A case report and review of the literature". *Journal of Medical Case Reports* 15.1 (2021): 193.

7. Kathpalia SK., *et al*. "Myomectomy of cesarean section: a safe option". *Medical Journal Armed Forces India* 72.1 (2016): S161-S163.

8. Byung-Joon P and Yong-Wook K. "Safety of cesarean myomectomy". *Journal of Obstetrics and Gynaecology Research* 35.5 (2009): 906-911.

9. Song D., *et al*. "Myomectomy during cesarean delivery". *International Journal of Gynecology and Obstetrics* 121.3 (2013): 208-213.

10. Mollica G., *et al*. "Elective uterine myomectomy in pregnant women". *Clinical and Experimental Obstetrics and Gynecology* 23.3 (1996): 168-172.

11. Gbadebo AA., *et al*. "Myomectomy at cesarean section: descriptive study of clinical outcome in a tropical setting". *Journal of Ayub Medical College, Abbottabad* 21.4 (2009): 7-9.

12. Adesuyin AG., *et al*. "Fertility and obstetric outcome after cesarean myomectomy". *Journal of Obstetrics and Gynaecology* 28.7 (2008): 710-712.

13. Iwo-Amah RS., *et al*. "Preferred mode of delivery in pregnancies co-existing with uterine fibroids". *International Journal of Clinical Obstetrics and Gynaecology* 8.2 (2024): 43-46.

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