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Case Series

Caesarean myomectomy with minimal blood loss

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ABSTRACT

A myoma is a non-cancerous tumor that involves muscle cells. There are two main types of myomas: leiomyomas, which occur in smooth muscle, the most commonly occur as uterine fibroids, and rhabdomyoma, which occurs in striated muscle. A patient who undergoes myomectomy during caesarean section will not require a second operation. In addition, caesarean myomectomy also promotes puerperal involution and significantly reduces fibroid related complications that can develop later in life such as menorrhagia, anaemia due to heavy bleeding and pain. Objective was to see the outcome of patients in terms of blood loss and post op fever undergoing caesarean myomectomy. The study design was hospital based observational study. 5 patients undergoing caesarean section with uterine fibroid willing to undergo myomectomy were included. Myomectomy at the time of caesarean section can be safe and successful if it is done carefully with minimum blood loss and intra op and post op complications.

Keywords: Myomectomy, Caesarean section, Fibroid

INTRODUCTION

A myoma is a non-cancerous tumour that involves muscle cells. There are two main types of myomas: leiomyoma, which occur in smooth muscle, the most commonly occur as uterine fibroids, and rhabdomyoma, which occurs in striated muscle.[1] Uterine fibromyomas affect a large number of women accounting for significant morbidity and health care costs during reproductive age.[2,3] Uterine fibroids are classified into major three types according to their position, intramural, sub- mucous and sub- serous and their positions play a role in the present symptoms.[4] Due to delayed childbearing and the increasing incidence of fibroids with age, the likelihood is rising that obstetricians will encounter pregnant patients with fibroids in pregnancy and will need to treat the associated complications.[5] Fibroid removal during caesarean delivery could be an option to promote the physiological haemostatic effect of uterine contractions, making postpartum safer as far as possible, on the basis of modifiable etiological factors. Paradoxically, the most feared complication mentioned for caesarean myomectomy is just massive blood loss, which can happen intra and post-partum and which can be sometimes the reason for a hysterectomy.[6] The complications of fibroids in pregnancy vary depending on the location of the fibroids and the trimester of the pregnancy. Some of the complications are spontaneous miscarriage, abdominal pain, foetal malpresentation, intra-uterine growth restriction, preterm labour, premature rupture of membranes, torsion of uterus, placental abruption, labour dystocia, obstructed labour, caesarean delivery and postpartum haemorrhage.[7,8] Management of myoma during caesarean section remains controversial issue despite progress in medical and non-surgical myoma treatment.[9] Myomectomy is the most common operation performed during caesarean section and accounts for 0.89% of all caesarean sections.[10] Among the most feared intraoperative and/or postoperative complication related to caesarean myomectomy, the massive haemorrhage represents a common condition investigated by

researchers. In several studies, obstetrics tried to investigated the real incidence and relevance of intra and post-surgical haemorrhage, referring to different variables as: absolute value of blood loss, point of haemoglobin lost, anaemia, need of transfusion and number of units transfused, need of hysterectomy.[6] A patient who undergoes myomectomy during caesarean section will not require a second operation. In addition, caesarean myomectomy also promotes puerperal involution and significantly reduces fibroid related complications that can develop later in life such as menorrhagia, anaemia due to heavy bleeding and pain.[11] Caesarean myomectomy can prove to be a beneficial surgery if done carefully with minimum blood loss and side effects and hence it can be very helpful for women.

Table 1: Demographic characteristics.

Variant	Case 1	Case 2	Case 3	Case 4	Case 4
Age	28 years	33 years	31 years	29 years	32 years
Parity	Primi	Gravid 2	Primi	Gravida 2	Gravida 3
Indication of C-section	Central placenta previa	Breech presentation	Feto-pelvic disproportion	Pre mature rupture of membranes	PIH and IUGR
History of previous C-section	No	Yes	No	No	No
History of abortion	No	No	No	Yes	No
Type of fibroid	Intramural	Sub serosal	Sub serosal	Intramural	Sub serosal
Size of fibroid	6×4 cm	8×9 cm	5×5 cm	8×6 cm	5×4 cm
Pre-op Hb	12.7 gm/dl	11 gm/dl	10.8 gm/dl	11.7 gm/dl	12.1 gm/dl
Post-op Hb	11.5 gm/dl	10.4 gm/dl	10.1 gm/dl	10.9 gm/dl	10.5 gm/dl
Blood loss	350 ml	300 ml	350 ml	250 ml	400 ml
Hospital stays	5 days	3 days	4 days	3 days	5 days
Post-op fever	No	No	No	No	No

CASE SERIES

Case 1

A 28-year-old primigravida with 38 weeks of gestation with central placenta previa was admitted to the hospital. On examination, she had a term-sized uterus with stable vitals. She was taken up for emergency caesarean section and a live female baby was delivered. Following complete removal of placenta and membranes, an intramural fibroid of 6×4 cm was removed successfully with minimal blood loss and with uterine artery torniquet and vasopressin 10% dilution use. Post- op vitals of the patient were stable. There were no postoperative complications including no post-op fever and the patient was discharged after 5 days of surgery.

Case 2

A 33-year-old female multigravida (gravid 2) with 1 live issue came at 38 weeks 5 days of gestation with breech presentation of baby. She had history of 1 previous C-section and no history of abortion. A sub-serosal fibroid of 8×9 cm was present in the uterus.

Caesarean section was done in view of breech presentation followed by removal of myoma. Uterine artery tourniquet and vasopressin 10% dilution was used during surgery. There was minimal blood loss during the caesarean myomectomy. Patient was discharged on day 3 of surgery with no post op fever and stable vitals.

Case 3

A 31-year-old primigravida presented with 39 weeks of period of gestation. On examination her uterus was term size with stable vitals. Her earlier ultrasound revealed a sub serosal fibroid of 5×5cm in the uterus. Elective caesarean section was done in view of feto-pelvic disproportion and a live healthy male baby was delivered followed by myomectomy. No post op complications were there and surgery was done with minimum blood loss and uterine artery tourniquet applied. Patient was discharged in a stable condition on 4th day after surgery.

Case 4

A 29 years old gravida 2 with 37 weeks of period of gestation presented with premature rupture of membranes. She also had a history of previous 1 abortion. On admission, she had stable vitals with a uterus of term size and an intramural fibroid of size 8×6 cm. An emergency caesarean section was carried out and a live male baby was delivered followed by myomectomy. Myomectomy was performed and complete haemostasis was achieved with the help of uterine artery tourniquet and 10% vasopressin dilution use. Patient was discharged satisfactorily on day 3 of surgery without any post op complications.

Case 5

A 32-year-old gravida 3 with 2 live issues presented at 37 weeks 4 days of gestation with PIH. On examination, her uterus was term size with an ultrasound revealing a sub-serosal fibroid of 5×4 cm in the uterus. An elective caesarean section was done in view of PIH with IUGR followed by myomectomy. A live female baby was delivered and surgery was done with minimal blood loss and uterine artery torniquet was applied and there was no post op fever. Patient was discharged on day 5 of surgery with no post op complications on follow up.

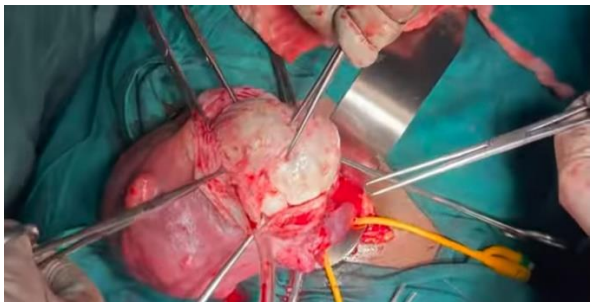

Figure 1: An intramural fibroid.

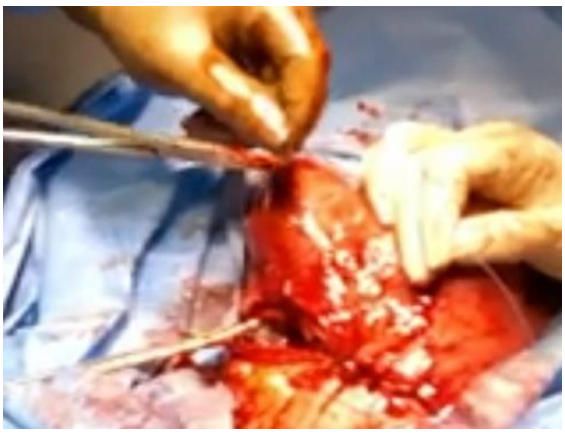

Figure 2: A sub-serosal fibroid.

Figure 3: An intramural fibroid.

Figure 4: A sub-serosal fibroid.

DISCUSSION

Even with so much latest technologies and better operative procedures, many surgeons still do not prefer myomectomy during caesarean section due to the fear of pre op, intra op and post op complications. In these cases, we have showed that myomectomy during caesarean section may not be as dangerous as it has been thought to be there has not been any significant increase in risk of haemorrhage, post-operative complications or prolonged hospital stay.[2,3,9] With large myomas in lower segment of uterus, myomectomy may be necessary and there is no absolute contraindication to removal of such myoma. Whereas small and single fibroids, if asymptomatic, need not be always removed.[12]

Dedes I et al, evaluated the risk of adverse events in a retrospective cohort of 162 women with fibroids undergoing CS out of which 48 underwent CM, large myoma size (>5 cm), age >40 years and multiple myomas were associated with increased blood loss. They concluded that CM performed by an experienced obstetrician in women without additional pre-existing risk factors can be safe.[13] A study on 212 cm reported by Senturk showed that there was no difference in the rate of complications, transfusion rates and drop in haemoglobin levels between the caesarean myomectomy group and the non-myomectomy group, and in those with myoma diameter greater than 5 cm.[5]

Zhao et al in 2019 in their retrospective study found that the presence of myoma diameter ≥5 cm and baby weight ≥4 kg were high dangerous factors for PPH ≥1,000 ml while, in general, excision of myoma through caesarean delivery reduced the danger of postpartum bleeding.[14] Salam K et al, in 2020 concluded that caesarean myomectomy is a secure process but can be only done by well- trained surgeon with some precautions.[15] The findings of these studies are almost similar to the finding of our case series that caesarean myomectomy if done by

a specialist can be a better option for pregnant females having fibroid.

CONCLUSION

Our findings conclude that it is beneficial for females for pregnant females having fibroid to perform myomectomy during caesarean section if size, location and type of myoma are well evaluated. If experienced obstetrician done the caesarean myomectomy which needed techniques, it reduces the burden to female for second surgery for fibroid removal and also removes the need of hospital stay for patients and further abnormal uterine bleeding because of leiomyoma. If done carefully with minimal blood loss, intra op and post op complications reduces.

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