

Classical Uterine Incision in Recent Obstetric Practice: Challenges: A Case Report

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Abstract

We report a case of 40yr old female G4P3L3 previous 3 caesarean sections in a known case of chronic hypertension with superimposed preeclampsia taken up for emergency hysterotomy with bilateral tubal ligation. Dense omental adhesions noted intraoperatively. Decision for a classical incision for hysterotomy taken. Patient required ICU admission in postoperative period and blood transfusion due to blood loss of 1200cc. The choice of uterine incision needs to be individualised for every patient weighing benefits vs risks based on gestational age, fetal presentations, uterine and fetal anomalies, adhesions and placental abnormalities.

Keywords: classical incision; hysterotomy

Introduction

Caesarean section is the most common surgical procedure in obstetrics, carried out when a vaginal birth could endanger both the mother and the baby. For most caesarean deliveries low transverse uterine incision is elected. However, if inadequate for baby delivery J extension, T extension or U extension of low transverse incision is done. In comparison to classical incision,

transverse incision is easier to repair, results in less bleeding at the incision site, and reduces the likelihood of bowel or omentum adhesions to the myometrial incision. Situated in inactive segment, it is also less prone to rupture in future pregnancies¹.

Classical uterine incision is the preferred incision in certain cases (see Table 1). It provides the benefit of delivering the fetus without difficulty especially in preterm cases⁷. Bladder injuries are very rare. Also, if required classical uterine incision can be extended without lacerating uterine arteries. However, the risk of haemorrhage, sepsis, adhesions and subsequent uterine rupture increases with classical uterine incision (see Table 2)^{6,8}.

Case description

A 40-yr old female with G4P3L3 previous 3 caesarean sections came to ANC OPD at 21 weeks of gestation with BP recorded as 200/100 mmHg with no premonitory signs or albuminuria. Patient had a history of appendectomy done 13 yrs back. Patient is a known case of hypertension noncompliant to medications. Patient admitted for BP optimisation and started on

antihypertensives. All investigations noted within normal limit. Maternal 2d echo done and ejection fraction 60% noted. Patient discharged on tab labetalol 200mg tds and tab nicardia R10 bd with BP <140/90mmHg.

On follow up BP 180/100mmHg recorded uncontrolled on injectable antihypertensives, albuminuria +1 and premonitory symptoms. Hence decision for emergency hysterotomy with bilateral tubal ligation taken in view of chronic hypertension with superimposed preeclampsia with impending eclampsia with previous 3 caesarean section with couple wanting permanent method of contraception. Intraoperatively, Omentum was densely adhered to fundus, lateral uterine wall extending to lower uterine segment (see Figure 1). Spinal anaesthesia converted to general anaesthesia. With no access to lower uterine segment, A classical uterine incision taken ~4cm taken over anterior uterine wall. Baby delivered (Still birth). Cord clamped, cut and baby handed over to neonatologist. Placenta and membranes expelled completely and spontaneously. Uterine incision sutured in 2 layers continuous interlocking sutures followed by continuous non-interlocking sutures using vicryl '1'. Hemostatic sutures taken in figure of 8 using chromic catgut (see Figure 2). Bilateral fallopian tubes identified and ligated using modified pomeroys method and specimen sent for histopathological examination. Hemostasis checked. Mops, instrument and needle count confirmed. Abdomen closed in layers after inserting intraperitoneal drain. Patient shifted to ICU for postoperative monitoring. Total blood loss 1200cc with 2 pcv transfused intraoperatively. Postoperative period uneventful. Patient shifted to tab Amlodipine 5mg bd and discharged with controlled BP.

Discussion

A study by Patterson et al found that classic caesarean sections had higher rates of maternal morbidity (blood

and blood products transfusion, hysterectomy, intensive care unit admission, infection rate death) and perinatal morbidity (stillbirth, neonatal death, 5-minute Apgar less than 7, neonatal intensive care unit admission) compared to low transverse cesarean sections³. Nevertheless, research conducted by Kawakita et al showed that women who underwent cesarean sections between 23 and 28 weeks of pregnancy did not exhibit any disparity in overall maternal results when comparing cases with a low horizontal incision versus a classical uterine incision. Several maternal outcomes were included in the compilation, including hemorrhage, wound infection and sepsis, blood transfusion, venous thromboembolism, hysterectomy, and admission to the intensive care unit⁴. Moramarco et al's research revealed that infants born between 28 and 31 weeks of gestation faced higher chances of experiencing endometritis, requiring transfusions, and being admitted to the ICU when delivered through the classical incision method. 1% of patients experienced uterine rupture after undergoing a classical incision without a vaginal trial⁵. In Luthra et al study, conducted between 23 and 34 weeks of gestation, the neonatal and maternal complications in low transverse incision versus low vertical in preterm cesarean sections were examined. The incision-to-delivery time did not vary significantly between the two incision types. However, cases with vertical incision had a higher risk of maternal transfusion. As per results of Luthra et al, the need for quick delivery do not support the use of classical uterine incision in preterm population.²

Conclusion

A low transverse uterine incision is elected for caesarean delivery unless there is specific indication for classical uterine incision. Blood and blood products and ICU availability needs to be confirmed for patients in the later

case. Despite early delivery, it is impossible to accurately predict or prevent uterine rupture and dehiscence for a woman who has previously had a classical caesarean delivery. Therefore, patients should be informed about the risk of uterine rupture in future pregnancies.

Clinical significance

The choice of uterine incision needs to be individualised for every patient weighing benefits vs risks based on gestational age, fetal presentations, uterine and fetal anomalies, adhesions and placental abnormalities.

Abbreviations

- ANC Antenatal care
- OPD Outpatient department
- PCV Packed cell volume
- BP Blood pressure
- ICU Intensive care unit

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Legend Figures and Tables



Figure 1: Omental adhesions seen intraoperatively



Figure 2: Uterine closure and hemostasis

Table 1: Indications for classical caesarean section

Fetal indications	Uterine and placental indications	Others
<ul style="list-style-type: none"> Fetal malformations such as sacrococcygeal teratoma, myelomeningocele, conjoined twins Non-cephalic preterm presentation Non reassuring fetal status 	<ul style="list-style-type: none"> Uterine anomalies Uterine fibroid Cervical carcinoma Placental accreta spectrum 	<ul style="list-style-type: none"> Morbid Obesity Bladder and bowel adhesions

Table 2: Risk of uterine rupture with prior uterine incision William's Obstetrics 26e

Sr no	Prior incision	Estimated rupture rate (%)
1	One low transverse	0.2-0.9
2	Multiple low transverse	0.9-1.8
3	Low vertical	1-7
4	Classical	2-9
5	T- shaped	4-9