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## Case Series

# Facing the unimaginable: Case series of hysterotomy at a tertiary care centre

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## ABSTRACT

**Background:** Hysterotomy is a surgical procedure involving a planned incision in the uterus. Although it is not commonly used for abortions, its incidence has increased due to higher rates of caesarean sections and placenta accreta spectrum.

**Case Report:** We report three such cases, first of a retained head of decapitated fetus; second of a patient with previous three caesarean section; and third of a patient with placenta previa.

**Conclusions:** This surgical technique is rarely used for abortions, but if it has to be done it is associated with a high rate of morbidity. With the increase in the incidence of previous uterine scars, the rate of placenta accreta spectrum has increased. Hysterotomy may be required in these cases.

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## 1. Introduction

A hysterotomy is a surgical procedure that involves making a planned incision in the uterus. It is commonly used in obstetrics for specific reasons, such as when medical termination of pregnancy has failed or when a normal vaginal delivery poses a high risk, such as in cases of placenta accreta spectrum and after two or three previous cesarean sections. The incidence of placenta accreta spectrum has increased alongside the rising rates of uterine surgeries.<sup>1</sup> This surge in cases of placenta accreta spectrum has consequently resulted in a higher prevalence of hysterotomy procedures. We report a case series in which hysterotomy was done for three different indications. First case is a rare case of fetal decapitation with retained head in uterine cavity, second case is of a previous three caesarean section and third case is of a patient with placenta previa. The diverse indications for hysterotomy in all three

cases underscore the need for careful consideration and individualized approach. Furthermore, it's worth noting that there were no significant maternal complications.

## 2. Case 1

The first case is of a woman who came to labour room with a delivered body and retained head (decapitated) in the uterine cavity. She was third gravida, with two live issues had a history of one previous caesarean section. Her period of gestation was 20 weeks. She had cramps in her lower abdomen for which she went to an unskilled birth attendant (Dai). According to her, an attempt to deliver the fetus was made, which led to the decapitation of the head which was retained in the uterine cavity. She was referred to our hospital for further intervention. On general physical examination, patient was stable. Per abdomen, fundal height was 14-16 weeks. On per vaginal examination, the internal os was closed. Syntocinon was given, but internal os did not dilate. Ultrasonography confirmed fetal head lying near

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the fundus of the uterine cavity and uterine scar of previous surgery was thinned out. The decision of hysterotomy was taken since bony spicules of decapitated fetal head could injure the uterus and cause further morbidity. Hysterotomy was done and fetal head removed (Figure 1). The patient was stable in post-operative period and discharged on day 4.



**Figure 1:** Decapitated fetal head, removed after hysterotomy

### 3. Case 2

The second case is of a fifth gravida with the previous three caesarean sections with only one live issue. There was history of fetal distress in first pregnancy for which caesarean section was done, baby was alive and healthy. In second pregnancy, she had preterm pains and underwent caesarean section in view of previous caesarean section at private hospital at 7 months of gestation, baby expired after 15 days. Third pregnancy also did not have a favourable outcome, caesarean section was done in view of previous 2 caesarean section with intrauterine demise. She came at 25 weeks of pregnancy with pain in lower abdomen. On per abdomen examination, uterine contractions were present. Patient was hemodynamically stable. On per speculum examination, bleeding per vaginam was present (show) and internal os was closed. Since it was a 25 weeks pregnancy and patient had bad obstetric history, emergency

hysterotomy was done in view of previous three caesarean sections with a risk of rupture. A fetus of 990 gm was delivered. Bilateral tubal ligation was done at patient's request. The baby expired after 3 days in neonatal ICU stay, patient was discharged after 7 days of hysterotomy.

### 4. Case 3

The third case was of a second gravida at 25 weeks of pregnancy, with a history of one caesarean section with placenta praevia (directly over internal os). Patient came to emergency with excessive bleeding per vaginam. On examination, vitals were not stable and the decision of emergency hysterotomy was taken for maternal sake. Fetal heart sound was not appreciated. A dead fetus of 810 grams was delivered and per operatively, the placenta was found to be covering internal os. In this case, hysterotomy was done for saving the mother, as she presented with unstable vitals. The patient was discharged after 5 days of hysterotomy.

### 5. Discussion

Hysterotomy for abortion is a surgical technique that is used to terminate the pregnancy by removing the fetus and placenta through abdominal incision. Out of all the abortion procedures, it has the highest risk of having complications.<sup>2</sup> Though this procedure is rarely used, but sometimes it is required for completion of abortion, in second and even first trimester.<sup>3</sup> Although incomplete spontaneous abortions are common in early pregnancy, as per the medical literature fetal decapitation is rare, however it has been reported in instrumental deliveries, pregnancy associated with amniotic bands and destructive procedures.<sup>4</sup> Hysterotomy is associated with significant morbidity. As the lower uterine segment is not well formed in the first and second trimesters, there is a greater chance of extension of uterine incision being placed in the upper uterine segment, which in turn compromises the scar strength.<sup>5</sup> Goldstein reported a considerable morbidity rate associated with hysterotomy.<sup>6</sup> Another study conducted at a tertiary care centre in India reported a high morbidity of 17%. This included hysterectomy in future pregnancy, DIC, respiratory distress, gut injury, febrile illness and paralytic ileus.<sup>7</sup> In all of our three cases no significant morbidity was present. All three cases were discharged in stable condition. Uterine scar due to hysterotomy is associated with increased risk of morbidly adherent placenta praevia and placenta accreta spectrum.<sup>1</sup> Tubal ligation or any other sterilization procedure can be considered to prevent future pregnancy after hysterotomy. The literature on scar integrity in subsequent pregnancies after hysterotomy is limited.<sup>8</sup> WM Clow and AC Crompton a conducted study on fifty-three such pregnancies after hysterotomy, they reported a substantial risk of rupture of the uterus in 14 cases and found that the previous scar was thin. Uterine rupture, impending

rupture, or presumptive rupture occurred in three of their cases. However successful vaginal delivery occurred in about 80% of cases.<sup>5</sup> We recommend that a low transverse incision should be given in the lower uterine segment and single or double layer closure should be individualized. A systematic review and meta-analysis of randomized controlled trials for the suture type for hysterotomy closure was done by Khanuja et al. They found that although barbed suture was associated with an overall decrease in operative time, and use of conventional monofilament suture was associated with an increase in uterine scar thickness, the clinical utility of these differences was not clear.<sup>9</sup> Genovese et al. conducted a systematic review and concluded that hysterotomy closure with continuous running sutures in two layers is a good option to prevent cesarean scar defect formation. The first layer should include the decidua and the second layer should overlap the first.<sup>10</sup>

## 6. Conclusion

Hysterotomy is a planned incision given in the uterus. This surgical technique is rarely used for abortions, but if it has to be done it is associated with a high rate of morbidity. With the increase in the incidence of previous uterine scars, the rate of placenta accreta spectrum has increased. Hysterotomy may be required in these cases. The incision must be transverse and made in the lower uterine segment if patient desires future pregnancy. Since lower uterine segment may not be well-formed in early gestation, tubal ligation should be considered in patients with completed family as future pregnancy may be associated with higher morbidity. We have reported a case series of three cases of hysterotomy done at our hospital, all the three indications were different. There was no significant maternal morbidity in our patients, however a study with more subjects with long term follow up are needed to study the complication rates, scar integrity and management of future pregnancies of women undergoing hysterotomy.

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## 8. Conflict of Interest

None.

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