



Case Report

Trans-Uterine Seldom Approach for Repair of Extensive Vaginal Tears Not Accessible Through Conventional Route: A Case Report

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Abstract

Background: *Obstetric hemorrhages are the most common cause of maternal morbidity and mortality in developing countries. Traumatic postpartum hemorrhage (PPH) secondary to high vaginal wall tear is a rare but life-threatening complication of vaginal delivery.*

Case Report: *We discuss a 20-year-old P1L1 female who had full-term vaginal delivery and was referred to our hospital from a peripheral hospital due to continuous vaginal bleeding after delivery. She had a high posterior vaginal wall laceration that was bleeding profusely, and the apex was not traceable vaginally. We successfully managed the tear through abdominal exploration with bilateral internal iliac artery ligation followed by a trans-uterine approach.*

Conclusion: *Cervicovaginal tears are seldom sutured through a transuterine approach. This case described a successful correction that avoided the use of obstetric hysterectomy.*

Keywords: *Traumatic PPH, Internal iliac artery ligation.*

Introduction

Postpartum hemorrhage (PPH) is a life-threatening event, which involves severe bleeding during and after the third stage of labor. PPH is one of the most common obstetrical complications, affecting up to 18% of deliveries. It accounts for 35– 55% of peripartum maternal deaths worldwide.¹ A vaginal tear is a spontaneous laceration to perineum that occurs

during the second stage of labor and it can be life threatening too in some cases. There are some conventional routes for repair of these tears e.g. under anesthesia cervicovaginal exploration with Sim's speculum pushing uterus from above for cervical exploration and pushing it above for vaginal exploration. In some cases, stepladder approach is used for tracing apex of the vaginal tear. Even one can use local suction with cannula

for suctioning of bleeding². Most of the times, these procedures achieve hemostasis; however, in some cases especially with multiple vaginal tears with repeated attempts to suture, create raw area and make vaginal mucosa more fragile. Here, we are discussing trans-uterine a seldom approach for repair of extensive vaginal tears not accessible through conventional route.

Case Report

A 20-year-old P1L1 day-1 full term spontaneous vaginal delivery patient referred from a peripheral hospital in view of continuous vaginal bleeding. She underwent vaginal exploration twice in a private hospital for vaginal tear. She received 6 units packed red cell concentrate, 6 fresh frozen plasma and 4 units of platelet at the same hospital. Despite, the patient's condition deteriorated due to bleeding and referred to Government Medical College and Hospital, Aurangabad for further management. On admission, the patient's general condition was poor, pallor (+++), afebrile, pulse 120/min, BP 80/60 mmHg, shock index 1.5, respiratory rate 30/minute, CVS tachycardia, RS bilateral chest clear, air entry bilateral equal, per abdomen examination uterus 28-week size, and firm.

Blood investigations showed Hb 5.5gm%, TLC5000, platelet count 1 lac/mm³. Liver and kidney function tests were normal. Emergency cervico vaginal exploration SOS exploratory laparotomy was decided. Local genital examination under anesthesia vaginal pack in situ, soaked with blood; there was passage of 500 gm blood clots after removal of the pack, vaginal tear present, profuse vaginal bleeding present, vaginal mucosa was fragile... Vaginal tears were tried to visualize by pushing the uterus cephalad; however, due to bleeding and multiple lacerations, visualization was not possible, and the patient already underwent vaginal exploration twice, hence, the decision for exploratory laparotomy was finalized. Intraoperative finding included uterus of 28-week size, well retracted upper segment, and bulged out lower uterine segment.

After removing packs and clots, vaginally lower uterine bulge disappeared. Bilateral internal iliac ligation was done to reduce the blood loss. After separating utero-vesicle fold, a transverse incision made in the lower uterine segment. Uterine cavity showed no active bleeding. The anterior and posterior lips of cervix were identified through trans-uterine approach. Posterior vaginal wall traced; there was high vaginal tear extending up to posterior fornix and bleeding profusely. Vaginal tear was sutured with Vicryl no 1-0 Intermittent suture through trans uterine approach. After inserting 5 intermittent sutures, bleeding was stopped and hemostasis was confirmed, intraperitoneal drain kept. The abdominal wall was closed in the layer. Vaginal exploration was done again, and no active bleeding was seen vaginally. Tear in labia majora and labia minora were sutured. The patient received 2 units of packed red cell concentrate and 3 units of FFP. Post operatively, the patient was shifted to ICU for monitoring. Post operative finding showed fair general condition, pallor (+), afebrile, pulse 90/min, BP 110/70 mmHg. Per abdomen examination showed well retracted 16-week size uterus. , No active bleeding was seen on local genital examination. The patient recovered well and discharged on day 7 of surgery.

Discussion

Obstetric hemorrhage is the most common cause of severe maternal morbidity and mortality in both developed and developing countries. PPH occurring within 24 hours of delivery is the leading type of major obstetric hemorrhage³. Genital tract trauma is the second leading cause of postpartum bleeding, followed by uterine atony.⁴ Predisposing factors to the trauma include parity, operative delivery, birth weight and precipitate labor. The treatment of vaginal tear is variable according to size, location, and severity of patient. In this report, the patient had profuse vaginal bleeding, and due to bleeding, visualization of high vaginal lacerated tear was not possible, and the patient already underwent failed attempt of

vaginal exploration with suturing twice. In such cases, bilateral internal iliac artery ligation is helpful as uterine arterial pressure drops with virtual elimination of the trip-hammer effect. The average decrease being 14% with the opposite side, 77% with the same side and 85% with both sides ligated^{5,6}. Blood loss could be arrested after internal iliac artery ligation as the vaginal artery is a direct branch of the anterior division of internal iliac artery. As it was impossible to approach the tear vaginally, cervicovaginal exploration was done through transuterine approach. This double approach aided in achieving complete hemostasis, avoid obstetric hysterectomy and help to preserve the future fertility of a patient.

Conclusion

Extensive high vaginal tears are difficult to access and tackle vaginally. If vaginal exploration fails then immediately abdominal exploration with trans uterine approach for repair of high vaginal tear is an option. So, abdominal exploration with bilateral internal iliac artery ligation followed by trans uterine approach to vaginal tear is a good option and a novel approach to the uterine conservative procedure in traumatic PPH and to save a life. More indications to explore abdominally require further studies.

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