Role of Laparoscopy in Management of Post Abortion Haemorrhage – Case Reports

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Introduction
Hemorrhage is the most common cause of abortion-related mortality, accounting for 30-40% deaths following abortion. Post abortion hemorrhage includes bleeding in excess usually > 500ml and/or requirement of admission or transfusions. [1] Although hemorrhage after abortion is rare, it is associated with significant morbidity and mortality.

Prior cesarean sections place women at higher risk of overall complications from second-trimester abortion, with one study demonstrating odds of complications seven times as great among women with two or more cesarean sections as among those with none [2]

Here by we present two cases of complications after attempted first trimester termination, managed laparoscopically. Because of the well known advantages of the laparoscopic approach compared with laparotomy only for gynaecological diseases, we report 2 cases of post abortal complications. The role of laparoscopy in minimally invasive management and preserving the uterus for future fertility is focused through these case reports.

Abstract
Hemorrhage after abortion is usually rare. Hemorrhage can be caused by atony, coagulopathy and abnormal placentation and procedure complications such as perforation, cervical laceration and retained tissue. Women with a uterine scar are at increased risk. Laparoscopy has been very useful in patients with post abortal complications like haematoma evacuation and visualization of the perforation, efficient repair of rent and avoiding unnecessary laparotomy. Laparoscopy is also helpful in visual guidance to suction evacuation in cases of an incomplete procedure. Presenting two interesting cases of Laparoscopic management of post abortal complications.

Keywords
Haemorrhage; Cesarean Scar Pregnancy; Perforation; Haematoma; Laparoscopy

Case reports
Case 1
A 22 year old female P1L1A1 with one previous lower segment caesarean section (LSCS), missed abortion, had suction evacuation a month before presented to us with a history of heavy bleeding per vaginum with clots ever since the evacuation. At the time of presentation, she was severe anaemic with haemoglobin of 4.5g/dl despite three units packed red blood cell (PRBC) transfusion after evacuation. Ultrasonography showed an abnormal appearing uterine contour with intramural solid lesion of 3.6x3.6 cm with ill-defined margins at the level of body and cervix of uterus, peri-capsular high resistance flow and a few cystic areas in lumen.

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Received April 16, 2017; Accepted May 31, 2017; Published June 15, 2017

Citation: Manjula Anagani (2017) Role of Laparoscopy in Management of Post Abortion Haemorrhage – Case Reports. SF Obste Heal J 1:1.

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She was admitted and 2 units of PRBC administered and taken up for laparoscopy. On laparoscopy, there was a haematoma measuring 4x3 cm in lower uterine segment extending into right uterine artery. After separating the utero-vesicular fold of peritoneum and posterior peritoneum, active bleeding spurt from right uterine artery seen. After pushing the bladder down, dissecting out the right ureter, bleeding spurt ligated using absorbable polyglactin suture. Haematoma and retained products of conception evacuated and sent for histopathological examination. The uterine rent was sutured with V-LOC sutures. Haemostasis was secured by placing a surgicele. Hysteroscopy was performed. There was no evidence of any retained products of conception in the cavity. Bilateral ureteric jets were seen on cystoscopy.

Post-operatively the patient was given I.V antibiotics and single injection of Methotrexate at dose of 1mg/kg body weight intramuscularly. She was administered 2 further units of PRBC. The patient developed pyrexia on 1st post-operative day which was managed with antibiotic and supportive treatment and the fever settled by the 3rd post-operative day. Pt discharged in stable condition.

Histo pathological examination was consistent with products of conception and there was no bacterial growth on blood and urine culture tests.

**Case 1**

4x3 cm Haematoma at Lower uterine segment  
Close up view of Haematoma  
Seperation of UV fold of peritoneum  
Visualisation of Haematoma
**Case 2**

A 36 years old female G4P2L2A1 with two previous lower segment caesarean sections (LSCS), with 6-7 weeks gestation was referred to us from a hospital with a history of heavy bleeding per vaginum during attempted dilatation and curettage (D&C) for incomplete abortion. A cervical pregnancy was suspected and the procedure was abandoned and referred to us. There was a history of taking a MTP pill 2wks before. Ultrasonography showed an irregular gestational sac in uterine body and cervix suggestive of incomplete abortion.

She was taken up for Laparoscopy and dense omental and bowel adhesions to anterior abdominal wall and lateral pelvic wall released. There was a scar ectopic pregnancy with haematoma and intact overlying peritoneum. The utero-vesical fold of peritoneum was cut, the bladder pushed down. Bilateral uterine artery ligation done. The ectopic scar pregnancy was excised along with removal of all the products of conception. The lower uterine segment was repaired with V loc sutures. Post-operatively the patient had an uneventful recovery and discharged in a stable condition.

**Case 2**
Discussion

Known etiologies of post abortal hemorrhage include Perforation, cervical laceration, retained tissue, abnormal placentation, atony, and coagulopathy.

Perforation is a rare complication of abortion. Perforation can be dangerous if it leads to hemorrhage. The incidence of perforation vary from 01/1000 to 3/1000 cases [3, 4, 5, 6-9] Small perforations are effectively managed conservatively. The use of a sound prior to abortion has been associated with increased risk of perforation [10, 11]

One study in a training setting has described differences in perforation by comparing cases before and after a policy change made the use of ultrasound routine. To the extent that perforation is associated with the potential for hemorrhage, the results are informative. The study found a decreased perforation rate (0.2% vs. 1.4%) when intraoperative ultrasound was routinely used. [12]

The first line treatment in the approach to bleeding is clinical examination to identify cervical laceration, perforation, and atonicity. Ultrasound to assess the reaccumulation of blood or retained tissue. Cervical lacerations are treated by direct pressure or repair. In case of atony, uterine massage and uterotonics are administered. [2]

When bleeding is excessive or refractory, clinician should move quickly to secondary treatment measures without delay: placement of additional intravenous lines, fluid resuscitation and laboratory assessment including hemoglobin, coagulation parameters and a cross-match for possible blood transfusion. It is important to have blood and coagulation factors available to properly manage DIC, a potential cause or effect of the hemorrhage. [13]

Re-evacuation under ultrasound guidance is appropriate if there is evidence of retained tissue or re-accumulation of blood. [13] In cases of refractory atony, the clinician can consider placement of a Foley or Bakri balloon to tamponade the endometrium. [13, 14]

Tertiary management such as uterine artery embolization (UAE), laparoscopy, laparotomy and hysterectomy may be necessary if primary and secondary treatment measures fail [13, 15]. Laparoscopy / Laparotomy is indicated in cases of significant perforation, confirmed bowel injury and hematoma evacuation. Laparoscopy is helpful in confirming a suspected perforation, to inspect the bowel and repair a perforation prevent unnecessary laparotomy in young women and women desiring future fertility. [13]

Hysterectomy should be considered only after other treatments have failed. Ultimately, hysterectomy is the definitive treatment for intractable post abortion hemorrhage and should be performed rapidly when all other treatments have failed. [13] In our experience, hysterectomy when feasible is advantageous and replaced laparotomies in many cases.

Caesarean scar pregnancy is the rarest form among ectopic pregnancies, but its frequency is increasing due to recent increase in caesarean deliveries. Early diagnosis of cesarean scar pregnancy is most important, for it can give rise to grave complications such as uterine rupture or massive hemorrhaging, and thus have an effect on maternal morbidity or mortality rate. [16]

Total hysterectomy has been a common treatment modality, since this form of pregnancy has shown cases with initial manifestations of massive hemorrhage.
as an obstetrical emergency [17]. With advances in ultrasonography resolution, detection at an earlier gestational age and more accurate diagnosis became possible to enable various methods for preservation of fertility, such as systemic or local administration of Methotrexate into the cesarean scar, hemostasis using balloon catheter after ultrasound-guided dilatation and curettage, laparoscopic or hysteroscopic guided wedge excision, and bilateral uterine artery embolization therapy. [18]

In our case of cesarean scar pregnancy was managed successfully laparoscopically. Correct diagnosis helps to decrease complications.

In this case report we highlight non radical management and role of laparoscopy and thereby avoiding hysterectomy

Conclusion

Incidence of post abortion hemorrhage can be reduced by measures such as avoiding uterine sound prior to D and E and use of ultrasound in localization of pregnancy and decreasing the risk of perforation during D and E procedure is recommended.

Early and active intervention in the management of post abortal hemorrhage helps to prevent complications and preserving fertility.

Now a days laparoscopy is valuable in dealing with post abortion complications as technology and expertise has increased and replacing laparotomy.

References


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