



SPONTANEOUS BROAD LIGAMENT HEMATOMA FOLLOWING A NORMAL VAGINAL DELIVERY

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ABSTRACT Broad Ligament hematoma is one of the very rare scenarios following a normal vaginal delivery. Here, we report one such case of a thirty-one-year-old woman G2P1L1 previous normal delivery with term gestation who experienced within one-hour severe colicky pain in right iliac fossa. On clinical examination she had severe tenderness in the above areas. An urgent trans-abdominal and trans-vaginal scan was done. A right-side broad ligament hematoma 5.1 x 6 cm was noted with no free fluid. She was given parenteral analgesics but no response and planned for Surgical Intervention. Considering her hemodynamic stable status, an Emergency Laparoscopy proceeded after reserving blood and getting informed consent. Right sided broad ligament hematoma around 5x 6 cm was visualized and the same evacuated. The bleeder uterine vessels cauterized adequately with perfect hemostasis and a drain was kept. Patient was discharged with baby after meticulous follow up with higher antibiotics for 7 days and normal CT and Ultrasound findings She was reviewed a week later and was doing good. Suspicion of spontaneous broad ligament hematoma in a normal vaginal delivery and prompt treatment with a minimally invasive approach is a highlight in our case.

KEYWORDS : Vaginal Delivery, Broad Ligament hematoma, Cauterization of uterine vessel.

INTRODUCTION

Broad ligament haematoma is one of the rarest events, say 1 in 20,000 deliveries. Haematomas are localized collection of blood outside the blood vessels. Usually, these haematomas are the results of upper vaginal, cervical, or uterine tears extending into uterine or vaginal arteries. Mostly, the haematomas occur due to trauma to the veins. Various predisposing factors like precipitate labour, caesarean delivery, operative vaginal delivery, or trauma to the abdomen, prolonged second stage of labour, macrosomia was discussed in the literature.

Spontaneous uterine artery rupture has been found to cause 40% maternal mortality when associated with labor and may be a result of pronounced blood pressure fluctuations during labor. Hormonal changes during pregnancy may also play a role as well-previous studies have shown that pregnancy-level estrogen, and to a lesser extent progesterone, suppresses intimal proliferation in response to vascular injury, and putting vessels at greater risk of rupture.

Para Genital Haematomas Are Of Two Types. Infralelevator And Supralelevator Types -

Infralelevator haematomas are vulval or vulvovaginal haematomas. They classically present with vaginal symptoms. However, Supralelevator haematomas spread upwards and outwards beneath the broad ligament.

Classical Symptoms

Excruciating Pain, restlessness, rectal tenesmus, retention of urine, unexplained pyrexia signs of hypovolaemia: collapse, shock, elevated pulse, decreased BP, pale, sweaty, clammy, sudden drop in haematocrit level.

Abdominal Examination

The uterus may be deviated upward and laterally.

Differential Diagnosis

Pelvic mass, Abscess, intra-abdominal bleeding.

Investigations

Blood tests CBC, Coagulation studies, blood grouping and cross matching must be done.

Imaging studies: Trans abdominal and Transvaginal USG, CT and

MRI for diagnosing haematomas its location, size and extent.

Management

First line – resuscitation – iv fluids and blood transfusion. Conservative management in the form of broad-spectrum antibiotics and continuous monitoring should be done if the haematomas < 5 cm and not expanding. Surgical management indicated if patient is hemodynamically unstable, haematomas > 5 cm or expanding. Surgical intervention in the form of haematoma evacuation, ligation of internal iliac artery, UAE or even hysterectomy may be needed

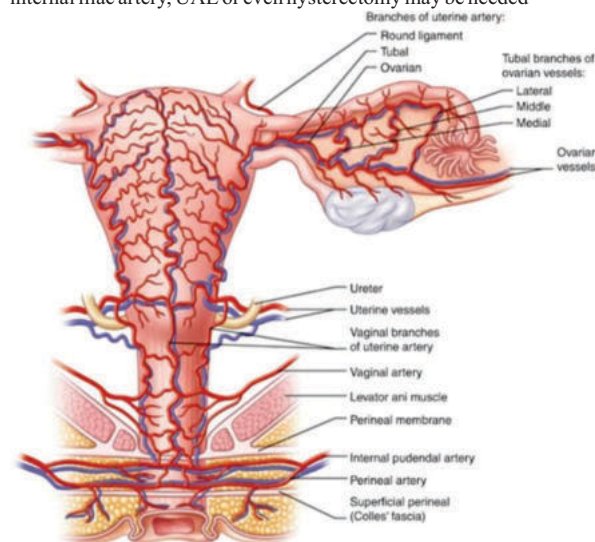


Fig 1: Blood Supply Of Uterus.

CASE REPORT

A 31-year G2P1L1, admitted at 38 weeks of gestation, previous vaginal delivery, spontaneously delivered after artificial rupture of membranes an alive male baby birth weight 2.955kg on 28/09/2023 at 9.44am. Right mediolateral episiotomy sutured in layers after checking for cervical or vaginal tears as a routine. Within one hour she presented with severe colicky right side lower abdominal pain in right

iliac fossa. On clinical examination she was haemodynamically stable, BP 120/86 mmHg, PR 92 /min, O₂ saturation 99%, RR 16/min and able to pass urine freely. Uterus was firm and contracted and felt just below the umbilicus slightly deflected to left with a tenderness, slight boggy irregularity on the right contour of uterus.

Repeat genital examination revealed episiotomy wound, cervix vagina, vulva, rectum intact. Urgent transabdominal scan followed by transvaginal USG showed a heterogeneous mass of 5.1x 6 cm on the right-side of uterus (Right broad ligament haematoma). Uterus was normal and slightly deviated to the left and ovaries were normal and no free fluid. Diagnosis of the Right Broad Ligament haematoma was confirmed by our Radiologist. In view of persistent excruciating colicky right lower abdominal pain not subsiding with parenteral analgesics she was planned for Emergency Surgical Intervention. Complete hemogram including Coagulation Profile was sent and all found normal -Hb 12.6gm%, platelets 2 lakh, INR 1.3.

In view of stable haemodynamic status Laparoscopy and proceed was decided. Informed consent from Patient and Husband was obtained and two units A1B positive was reserved. Patient was shifted to OT and under General anaesthesia and patient in dorsal position, 10mm supraumbilical and two other lateral ports made. Per operatively there was Broad Ligament haematoma on the right side 5cm x 6 cm size between the leaves of broad ligament not extending down to bladder or rectum or lateral pelvic wall. No blood collections inside peritoneal cavity. Both ovaries and tubes normal. The haematoma was evacuated completely and around 220ml of fresh clotted blood was removed. Underneath the haematoma the bleeding uterine vessels were identified and cauterised with perfect haemostasis. The posterior aspect of uterus and bladder area checked for any bleeders or haematoma and after keeping a drain the abdominal ports closed. There was no undue bleeding PV.

Patient was shifted to post operative intensive care ward, vitals monitored, drain collections and hourly I/O chart monitored. One unit blood transfusion was given post-operatively for replacement of blood loss as post operative Hb was 10.6gm%, INR 1.5, platelets 1.5 lakhs. Everyday complete blood count, renal function test, electrolytes, coagulation profile for next 5 days. Patient was started on injection Piperacillin 4.5gm IV was given sixth hourly for 7 days. 1. There was no intraperitoneal or retroperitoneal collections. Drain was removed after 3 days when it was dry., Patient passed urine and motion normally, CBC done, haemoglobin was 13.6gm%, Platelet 2.0 lakhs, INR 1.1. Repeat ultrasound and CT abdomen was done only to confirm uterus and adnexa was normal and no intraperitoneal or retroperitoneal collections of blood. Patient with her baby was discharged in good condition with stable vitals. She was reviewed after one week, ultrasound repeated to confirm uterus and adnexa normal. Mother and baby doing well.

DISCUSSION

Broad ligament haematoma is an uncommon complication that can occur following a spontaneous vaginal delivery. Several cases of broad ligament hematomas were described in the early 1960s and 1970s. It is a serious maternal morbidity and can even lead to maternal death if it is not diagnosed in a timely manner. Its nonspecific clinical signs and symptoms ranges from mild pain to severe haemodynamic instability. It can be silent and not cause any obvious vaginal bleeding. Clinical symptoms are vague with persistent perineal pain, urge to defecate, unable to void within first few hours of delivery. Murali et al reported a case where the patient presented with perineal heaviness and inability to pass urine.

In another case reported by Nelofer et al patient presented. with shock and needed resuscitation and volume replacement. Hence a high degree of clinical suspicion is a must for diagnosis of such rare complication. Resuscitation, volume replacement, and surgical exploration are the key steps in the management. Imaging modalities like transabdominal/ transvaginal ultrasound confirms the diagnosis. For broad ligament haematomas conservative management was recommended.

Imaging modalities like transabdominal ultrasound and MRI can help in confirming the diagnosis. It has been suggested that MRI depicts postpartum haemorrhage even in deep extraperitoneal regions where the hematoma is clinically non-apparent, and in addition it can delineate the extent of the hematoma. Broad ligament haematoma can be managed both conservatively and surgically depending on patients.

haemodynamic status, size, and rate of haematoma expansion. Small non spreading ones can be managed conservatively however larger ones might need internal iliac artery ligation, UAE or even hysterectomy. Our patient was haemodynamically stable after confirmed diagnosis and since patient's pain did not subside with medication and given the circumstances that the haematoma might expand later, we decided on the surgical management i.e., laparoscopic evacuation of broad Ligament hematoma and electro-cauterisation of bleeding vessels.

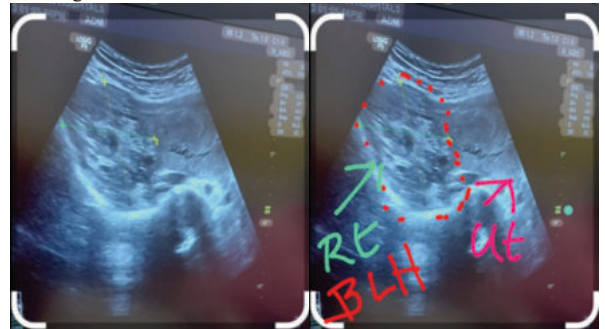


Figure 2: Trans Abdominal USG Finding Of Right Broad Ligament Haematoma

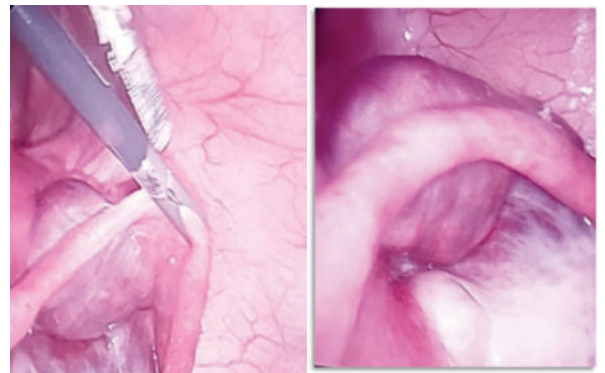


Figure 3: Laparoscopic Evacuation Of Right-side Broad Ligament Hematoma.

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