Case Report

DOI: 10.7860/JCDR/2022/54920.16801

Massive Traumatic Postpartum Haemorrhage with Co-incidental Atypical Eclampsia and Abdominal Koch's- A Maternal Near Miss

Obstetrics and Gynaecology Section

RUBY BHATIA[1], KARTIKA PANDEY[2], SUKHBIR PAL KAUR[3], KARISHMA SINGH[4]

ABSTRACT

Obstetric haemorrhage is related with augmented risk of maternal morbidity and mortality and continues to be the second greatest direct cause of near miss and maternal death. Postpartum Haemorrhage (PPH) is the most common form of obstetric haemorrhage, atonic PPH being responsible for 80% cases. Traumatic PPH with massive vulval haematoma, an infrequent but possibly fatal condition if left undiagnosed and untreated. Hence, prompt recognition and management with simultaneous resuscitation and operative procedure is vital to save life of mother. A 24-year-old P1L1 female with traumatic haemorrhage with the formation of massive vulval haematoma, periurethral tears, extensive cervical and vaginal wall tears with hypovolaemic shock with severe anaemia admitted to the tertiary care hospital. Immediate resuscitation measures were taken followed by vaginal exploration for the vulvovaginal haematoma and a multispeciality approach for the better outcome. However, postvaginal exploration after 24 hours, there was progression in vulvo vaginal haematoma size, with haemodynamic instability. Re-exploration under anaesthesia via abdominal approach was performed. The patient required a longer hospital stay. Thus, early diagnosis and treatment of puerperal haematomas can prevent significant complications.

Keywords: Haematoma, Hypovolaemic shock, Vulva

CASE REPORT

A 24-year-old, P1L1 short statured female was referred in obstetric emergency unit of the tertiary care hospital in hypovolemic shock with severe anaemia, a maternal near miss. Patient had erratic antenatal checkup by local nurse at village. She had vaginal delivery by unskilled birth attendants at home two hours back, delivered 1.5 kg male followed by massive PPH. On general physical examination general condition was sick, tongue was dry, pallor was present, Jugular Venous Pressure (JVP) was raised and massive pedal oedema was present. Her pulse was 140 bpm, Blood Pressure (BP) was 70/50 mmHg, Respiratory Rate (RR) was 24/min, SpO_2 94% on room air. On per abdomen examination there was soft distension with presence of fluid thrill, uterus was 24 weeks size and well retracted. On local examination episiotomy was present on the right-side with haematoma of size 5×3 cm at its apex. On left-side of perineum there was massive vulval haematoma (12×12 cm). Vaginal mucosa was lacerated with multiple suture in episiotomy site with profuse haemorrhage per vaginum. Packed Red Blood Cells (PRBC) was on flow and catheter draining highly concentrated 200 cc urine. Patient was admitted as near miss mortality.

Immediate resuscitative measures maintaining airway, breathing, circulation was carried out. Crystalloids and colloids were rushed with two wide bore intravenous cannulas. Dual ionotropic support with noradrenaline and dobutamine was initiated. Haemoglobin was 4 gm/dL, platelet- 25,000 per microlitre, International Normalised Ratio (INR)- 2.00, Activated Partial Thromboplastin Time (APTT)- 54.9/31.4 with deranged clot retraction time. Patient was taken up for emergency vaginal exploration under general anaesthesia after high-risk consent. A vulval haematoma of size 12×12 cm was on left-side of perineum. Multiple cervical tear were present at 3, 6, 8 and 9 O'clock varying in length from 1.5 to 3.5 cm, all bleeding profusely [Table/Fig-1].

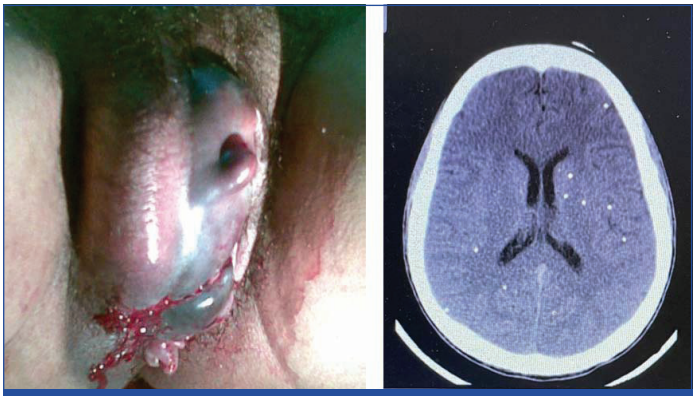
Multiple profusely bleeding vaginal tears extending upto vault was identified. Two periurethral tear bleeding profusely was identified. Vulval haematoma was evacuated and drained followed by closure with interrupted chromic catgut No 1 and haemostasis was achieved. Cervical tear, vaginal tear, periurethral tear were sutured. Episiotomy was resutured. Tight vaginal packing with 10 knotted packs were done. Patient was transfused with four units each of PRBC, random donor platelets, FFPs and 10 units of crypopreciptate.

Postoperative day one, 12 hours after vaginal exploration, her vitals started deteriorating inspite of inotropic support. On per abdomen examination there was soft abdominal distension, fluid thrill was present, however uterus was well retracted. Patient again developed massive left-sided vulval swelling of size 20×15 cm suggestive of haematoma extending from the lower border of mons pubis to groin fold and posteriorly involving left buttock with bleeding per vaginum through the packs. Repeat haemoglobin was 6 gm/dL with deranged coagulation profile. A plan for abdominopelvic re-exploration in view of haemodynamic instability, deranged coagulation profile and increasing vulvovaginal haematoma was made.

Patient was taken up for abdominopelvic re-exploration. One litre of straw coloured ascitic fluid was present in paracolic gutter and cul-de-sac. Ascitic fluid was drained and sent for adenosine deaminase, cytology, Cartridge Based Nucleic Acid Amplification Test (CBNAAT) and culture sensitivity. Left-sided broad ligament haematoma measuring 5×4 cm was seen. Step-wise devascularisation was done with bilateral uterine artery, descending cervical artery ligation and ovarian artery ligation. Post step-wise devascularisation, broad ligament haematoma size was regressed. Uterus with bilateral fallopian tubes were normal. Simultaneously massive vulvovaginal haematoma was evacuated and drained with haemostatic suture and vaginal packing was done. Abdominal drain as well a drain in repaired vulval haematoma was inserted for 48 hours. Patient was shifted to Intensive Care Unit (ICU) with pulse of 160 bpm and unrecordable blood pressure. Patient was on double ionotropic and ventilatory support on Pressure Support Ventilation (PSV) mode for 96 hours. However, urinary output was adequate.

A total of 10 units of PRBC, 12 unit FFP, 10 unit of random donor platelet with 20 units cryoprecipitate were transfused. Patient was put on higher antibiotics, piperazillin tazobactum 450 mg 8 hourly for five days was given to the patient.

On postoperative day six, patient had an episode of convulsion with raised blood pressure of 170/110 mmHg. Loading and maintenance dose of magnesium sulphate as Pritchard regimen was followed and continued for 24 hours. A diagnosis of atypical eclampsia was made. On fundus examination vessel attenuation with prominent pointed spicules with changes of retinitis pigmentosa was seen. Non Contrast Computerised Tomography (NCCT) head reported neurocysticercosis stage IV [Table/Fig-2]. Patient was put on tablet Levitracetam 750 mg twice a day. Ascitic tap confirmed diagnosis of abdominal Kochs with ADA 100 IU/L. CBNAAT of ascitic fluid was positive for *Mycobacteruium tuberculosis*.



[Table/Fig-1]: A vulval haematoma.
[Table/Fig-2]: NCCT head neurocysticercosis stage IV. (Images from left to right)

Patient was discharged on postoperative day 16 of abdominopelvic exploration on ATT in stable condition paving the way to safe motherhood with advice for regular follow-up in postpartum and neurological clinic.

DISCUSSION

The classic definition of PPH corresponds to blood loss of more than 500 mL [1], many authors have shown that the impact on the maternal circulatory state was only real for a haemorrhage greater than 1000 mL [2]. Index case was in hypovolemic shock due to massive blood loss with fall in haemoglobin to 4 gm% and needed four units each of PRBC, random donor platelets, FFPs and 10 units of cryoprecipitate. Combs CA et al., conducted a case-control study to assess the risk factors for PPH in which he concluded that factors like prolonged third stage of labour, preeclampsia, mediolateral episiotomy, previous history of PPH, twins, augmented labour, forceps delivery have significant association with haemorrhage [3]. PPH is related to three main causes: uterine atony, abnormalities of placental insertion and sores of the genital tract [4]. The puerperal haematoma is a well known old complication seen in hospitals. Puerperal vulvovaginal haematoma nonetheless remains a potentially serious complication. In most of the cases, it was seen that bleeding was not externalised. Numerous risk factors associated with it are: primiparity, instrumental extraction, multiple gestation, macrosomia, difficult delivery, vulvovaginal varices, coagulation anomalies, difficulty in achieving haemostasis and prolonged dilation [5]. Vulvovaginal haematoma bleeding spreads into the fatty tissue with the opportunity of an upward extension in the base of the broad ligament and the retroperitoneum [6]. Puerperal vulvovaginal haematoma are rare and have not been extensively reported. They are usually unilateral. Insidiously attention being drawn to them when the woman collapses in shock, groans in pain, or complains of "bearing down" pain after vaginal delivery [7]. Index case presented with traumatic PPH with massive vulvovaginal haematoma associated with pain and hypovolemic shock. The medical management of shock secondary to a puerperal vulvovaginal haematoma is grounded on the correction of hypovolemia and likely coagulation disorders. As with any haemorrhage, it is crucial to anticipate blood loss in order to prevent subsequent complications. Simultaneous resuscitation, vaginal exploration and transfusion of blood and blood products following a multispeciality approach remains key to successful outcome as was performed in index case. Patient underwent vaginal exploration for the vulvovaginal haematoma. However, following vaginal exploration, on postoperative day one, there was redevelopment of vulvovaginal haematoma size, with falling haemoglobin and haemodynamic instability. Re-exploration under anaesthesia via abdominal approach in step-wise devascularisation was done and broad ligament haematoma size regressed. Thus, patient required longer hospital stay, increased need for antibiotics and blood transfusion, and greater recourse to surgical intervention. Benrubi G et al., reviewed 32 cases of vulvar and vaginal haematomas treated at three hospitals in Jacksonville, Florida. It was observed that patients who were managed conservatively have increased risk of complications and hospitalisation [8]. Hence postexploration, extensive monitoring of the operation site, evaluation of the vital signs, and urinary output should be monitored in order to have a check on complete haemostasis [9]. After re-exploration patient was on ionotropic and ventilatory support in ICU for 72 hours. Early recognition of vulvovaginal haematoma, prompt surgical management and resuscitation can save many a near miss. To prevent infection, broad-spectrum antibiotics should be given. Massive blood transfusion, good analgesia and close observation are important postoperatively. Resolution of haematoma will improve outcome and result in reduced scarring, postpartum pain, and dyspareunia [10]. In index case, it was also seen that patient's CBNAAT of ascitic tap was positive for *Mycobacterium tuberculosis* and ADA 100 IU/L confirming the diagnosis of abdominal kochs which required multidisciplinary approach including infectious disease specialist, obstetrician and tuberculosis public health department. It is a diagnostic challenge especially without involvement of lung and also with non specific clinical presentation. Thus, leading to delay in the diagnosis and development of the complications. Therefore, one should be vigilant while dealing with unexplained abdominal complaints to ensure timely diagnosis and management [11]. The purpose of this case report was to create awareness regarding the diagnosis of atypical features of eclampsia in order to avoid related complications. Atypical eclampsia poses a diagnostic dilemma and a hurdle for the treating obstetrician. The major problem with atypical types of eclampsia is its unpredictable onset; prompt diagnosis and treatment are critical for minimising morbidity and mortality [12]. Graves JC and Vandergriff JV conducted a case report on atypical eclampsia in which author reports a case of 33-year-old women gravida 5 para 4 abortus 1 presented 10 days postpartum with eclampsia. There was no history of hypertension, oedema, or proteinuria during her prenatal visits and has no history of preeclampsia or eclampsia in previous pregnancies. Thus, it shows presence of eclampsia in the late postpartum period without prior history or evidence of preeclampsia or eclampsia during her present pregnancy or previous pregnancies [13].

CONCLUSION(S)

Maternal near miss mortality related to potentially fatal traumatic PPH with delayed referral by unskilled birth attendants at primary level in the resource poor setting of India is still rampant in modern India. Presence of skilled birth attendant for delivery at primary care level with early diagnosis of PPH, prompt referral and no delay in reaching and receiving care with multispecialty approach and availability of blood and blood products can save many maternal deaths.

REFERENCES

[1] Gilstrap III LC, Ramin SM. Postpartum hemorrhage. Clin Obstet Gynecol. 1994;37(4):824-30.
[2] Jouppila P. Post-partum haemorrhage. Curr Opin Obstet Gynecol. 1995;7(6):446-50.
[3] Combs CA, Murphy EL, Laros Jr RK. Factors associated with postpartum hemorrhage with vaginal birth. Obstet Gynecol. 1991;77(1):69-76.
[4] Dreyfus M, Beucher G, Mignon A, anger B. Initial obstetric care in the event of postpartum hemorrhage. J Gynecol Obstet Biol Reprod. 2004;33 (suppl 8):4S57-4S64.

[5] Riethmuller D, Pequegnot-Jeannin C, Rabenja CA, Koeberle P, Schaal JP, Maillet R. A rare cause of postpartum hemorrhage: A genital thrombus. Journal de Gynecologie, Obstetrique et Biologie de la Reproduction. 1997;26(2):154-58.
[6] Bienstman-Pailleux J, Huissoud C, Dubernard G, Rudigoz RC. Management of puerperal hematomas. Journal de Gynecologie, Obstetrique et Biologie de la Reproduction. 2008;38(3):203-08.
[7] Lyons AW. Post-partum hematoma. New Eng J Med. 1949;240(12):461-63.
[8] Benrubi G, Neuman C, Nuss RC, Thompson RJ. Vulvar and vaginal hematomas: A retrospective study of conservative versus operative management. Southern Med J. 1987;80(8):991-94.
[9] Mawhinney S, Holman R. Puerperal genital haematoma: A commonly missed diagnosis. The Obstetrician & Gynaecologist. 2007;9(3):195-200.
[10] Gurtovaya Y, Hanna H, Wagley A. Spontaneous intrapartum vulvar haematoma. Midwives. 2013;16(5):48.
[11] Lahbabi M, Brini J, Massaoudi K. Tuberculous peritonitis in pregnancy: A case report. J Med Case Rep. 2014;8(1):01-04.
[12] Sharma N, Jethani R, Sharma S, Jante V, Agarwal M. Late onset atypical eclampsia: A case report. J Clin Diag Res. 2019;13(1):QD07-08.
[13] Graves JC, Vandergriff JV. Atypical eclampsia: A case report and review. Tennessee Medicine: Journal of the Tennessee Medical Association. 2001;94(5):173-75.

PARTICULARS OF CONTRIBUTORS:
1. Professor, Department of Obstetrics and Gynaecology, MMIMSR, Mullana, Ambala, Haryana, India.
2. Postgraduate Resident, Department of Obstetrics and Gynaecology, MMIMSR, Mullana, Ambala, Haryana, India.
3. Associate Professor, Department of Obstetrics and Gynaecology, MMIMSR, Mullana, Ambala, Haryana, India.
4. Postgraduate Resident, Department of Obstetrics and Gynaecology, MMIMSR, Mullana, Ambala, Haryana, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. Kartika Pandey,
Room No-200, I-Block, MMU, Mullana, Ambala, Haryana, India.
E-mail: kaarti_007@yahoo.com

PLAGIARISM CHECKING METHODS: [Jain H et al.]
- Plagiarism X-checker: Jan 15, 2022
- Manual Googling: Jun 30, 2022
- iThenticate Software: Jul 09, 2022 (17%)

ETYMOLOGY: Author Origin

AUTHOR DECLARATION:
- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Jan 14, 2022**
Date of Peer Review: **Feb 11, 2022**
Date of Acceptance: **Jul 11, 2022**
Date of Publishing: **Aug 01, 2022**