



Case Report

Atonic PPH in a referred case: Keys to manage

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ABSTRACT

According to WHO, primary Postpartum hemorrhage is commonly defined as blood loss more than 500 ml after normal vaginal delivery within first 24 hours. A 28 years old multigravida woman with P3 L3 came to the obstetrics department with a history of heavy bleeding per vagina soon after normal vaginal delivery. She was diagnosed as case of primary PPH (Atonic PPH) with severe anemia at post-partum day two of vaginal delivery. Patient's routine and specific investigations were sent after admission. She was treated with drugs like uterotonics, antibiotics, bimanual massage, balloon tamponade and blood transfusion. She was discharged in a stable condition. Early detection and prompt treatment are the keys to reduced maternal mortality ratio by managing postpartum haemorrhage.

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1. Introduction

Postpartum hemorrhage is considered as one of the leading cause of maternal deaths across the globe. The American college of Obstetricians and Gynecologists defines early postpartum hemorrhage as total blood loss or loss of blood coinciding of at least 1000 ml with sign & symptoms of hypovolemia within 24 hours after delivery of the fetus or intrapartum loss. Majority of deaths occurred within 24 hours of delivery due to PPH, which could be prevented by timely management through active management of third stage of labour. Prevention and accurate treatment of PPH is one of the important step in achievement of millennium development goals.

2. Case Presentation

A 28 years old multigravida woman who was a referred case admitted in Obstetrics ward with chief complaint of P3 L3 at post-partum day 2 of vaginal delivery with primary PPH (Atonic PPH) with severe anemia. The pregnancy was spontaneous conception with regular intake of calcium and iron/ Folic acid, received 2 doses of TT vaccine. USG (Obs)

report on (27/09/19) showed Single live intrauterine fetus of 36 weeks+ 6 days with single loop of cord around the neck, liquor adequate, placenta posterior, cephalic presentation, with expected fetal weight 3093 gms, and fetal heart rate was 150 bpm.

Patient's menstrual history was normal with previous cycle of 3/30 days with average flow. Her obstetric history included P1- 6 years / male/FTVD/ A&H, P2- 3 years/ female/ FTVD/A&V, P3- Day 0 of life/ Male/FTVD/ on Ventilation in Roorkee Hospital.

Patient was apparently well 1 day back when she had labor pain in abdomen so she sought medical advice and got admitted in a hospital in Roorkee, following which she delivered at 4 pm on 27/09/19 at same hospital. After delivery patient had heavy bleeding per vagina and used multiple pads following it. Patient was then referred to AIIMS Rishikesh in view of uncontrollable heavy bleeding.

On her arrival initial vital signs were PR-156/min., B.P- 102/64 mm of Hg, RR- 24/min., Chest B/L clear, CVS- S1S2 present and IVP was not raised. During initial examination, patient was conscious and oriented but pallor at the same time. There were no H/O prolonged leaking, fever, DM/HTN/TB/ Thyroid, and no significant H/O surgery in past.

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On general examination per abdomen, it was found that patient's abdomen was not distended, uterus size corresponding 24 weeks and it was hypotonic.

During per vaginal examination there was a Pack seen in vagina, blood trickling and bits of membrane were present. In vagina small tear in fourchette was noted. During per speculum examination cervix was explored and no tear was present.

3. Investigations

Hematological examination revealed that patient's blood group was (O positive), Haemoglobin (6.4 gm/dl), total leukocyte counts (10050/ cu mm) with increased distribution of neutrophils and Platelet count(1094 lakhs/cu mm). General blood picture revealed RBC anisocytosis with predominantly normocytic normochromic cells with few hypochromic cells. Impression of Normocytic anemia with neutrophilic leukocytosis was made by treating consultant.

4. Course during Hospital Stay

When Patient was admitted, her routine and specific investigations were sent. Because there was pack left in the vagina so patient was shifted to the labour room and pack was removed. Small vaginal tear in fourchette was noted and repaired with vicryl rapid 2-0. Vaginal bits of membranes were removed, bimanual massage was done and Foley's catheterization drained 300 ml of clear urine. Simultaneously Inj. Oxytocin 20 units in 500 ml NS was started with Inj. Carboprost 1 amp. IM, Inj. Tranexa 1 gm IV, and Tab. Misoprostol 1 gm Per rectum was inserted. Balloon tamponade was inserted and inflated with 300 ml NS and kept in situ for 24 hrs. Patient received 3 PRBCs IV (27/09/19, 28/09/19, 30/09/19) due to low Hb and 4 FFPs IV due to increased PT/INR on 27/9/19. Injectable antibiotics were started (Inj. Ceftriaxone/ Metrogyl/ Amikacin) after delivery for 5 days. After all these management being given patient was comfortable and her GCS was fair. Per abdomen assessment revealed uterus corresponding to the 22 weeks size and well contracted. Her postnatal period was uncomplicated and bleeding per vaginum was within normal limits. Patient was later discharged in a stable condition.

5. Advice on Discharge

She was advised for sexual abstinence for 6 weeks. Her course of treatment was continued with Tab Taxim 1 BD x 5 days, Tab. Pantop 40 mg OD x 5 days, Tab. Flexon SOS, Tab. Iron 1 OD X 6 months, and Tab. Shelcal 1 BD X 6 months. She was instructed to perform deep breathing exercises and active leg movements. She was advised for follow up visit in OBS OPD after 6 weeks or SOS.

6. Discussion

Postpartum haemorrhage is found to be most critical situation after baby birth. It is assumed that all pregnancies beyond 20 weeks are considered on risk of postpartum bleeding. As stated by WHO that 60% maternal deaths are occurring due to postpartum bleeding in under developed regions. It is surprising that incidence of PPH has been increased from 1.5% in 1999 to 4.1% in 2009 and atonic PPH is more commonly among all four types of PPH.¹

As labour is divided in four stages and third stage is considered as most risky in terms of PPH, which starts with delivery of the baby & ends with delivery of the placenta. As suggested by data, with active management of labour, the cases of PPH can be limited approximately 5% irrespective of expected management where the PPH cases are 13%.²

PPH can occur due to various reasons which are commonly known as 4 T s, they are Tone, Trauma, Tissue and Thrombin. Among all these uterine atony is considered as the most common cause of PPH, which is inability of the uterus to contract after baby birth. It leads to severe bleeding after delivery. Similarly in our patient that we have received with PPH had heavy bleeding and the cause identified was atonicity of uterus. Some recent evidences show that history of previous PPH, multigravida, induction of labour, chorioamnionitis, retained bits of membranes, instrumental delivery, heavy birth weight of baby and use of magnesium sulphate can be the risk factors for PPH.³ Although, our patient was multigravida and had retained bits of membranes during exploration of uterine cavity but there was no evidence of previous PPH, instrumental delivery and use of magnesium sulphate.

Most of high quality papers suggested the active management of third stage of labour as a key concept in the reduction of incidence and severity of PPH. WHO guidelines regarding prevention and management of PPH give explanation about active management of third stage of labour (AMTSL) which includes three components:

1) giving uterotonics for uterine contraction 2) Delayed cord clamping 3) Controlled cord traction and uterine fundal massage if uterine tone has lost.¹

Oxytocin is the drug of choice among all uterotonics for PPH caused by uterine atony. Combination of other uterotonics like carboprost, Tranexa, and misoprostol can be given to manage PPH and these all drugs were given in our patient as a standards measure of treatment and she responded well to all of these. Use of methergine is also recommended by WHO in the management of PPH yet it was not added in our patients' regimen.⁴

Some studies stated bimanual uterine compression as first line treatment with the other measures to counteract uterine atony, and it is performed by putting one hand on the posterior aspect of fundus through abdomen and massaged in synchronization with other hand which had been inserted in the vagina and compress the body of the uterus. This

was also performed in our patient along with other drugs. Although some contradictory studies came up with findings that uterine massage has less effect in PPH management.⁵

Uterine packing is not recommended in the management of PPH, but it was already done in patient because she delivered in a low resource setting. So the pack was removed and vaginal tear was immediately sutured. Insertion of balloon tamponade is one of the effective measure to control postpartum bleeding. In present case balloon tamponade filled with 300 ml of NS was inserted in the patient's uterus and kept in situ for 24 hours. Antibiotics coverage were also given to limit the chances of infection and enhance smooth recovery.⁶

As postpartum bleeding can lead to hemorrhagic shock and patient in our case had heavy bleeding so she was being infused with crystalloids and her anemia was managed with packed red blood cells and colloids (fresh frozen plasma) infusion.

7. Conclusion

The patient described in this case was a woman with heavy bleeding per vagina and diagnosed with primary postpartum hemorrhage. She was admitted to obstetrics ward and managed with uterotonics, antibiotics and balloon tamponade. After 5 days of treatment she was discharged in stable condition with follow up advices.

8. Source of Funding

None.

9. Conflict of Interest

None.

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