ORIGINAL RESEARCH PAPER
Volume - 10 | Issue - 11 | November - 2021 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

FERTILITY PRESERVATION IN REFRACTORY ATONIC PPH

Obstetrics & Gynaecology

Dr.T.Hema* MBBS.,DGO.,MD(OG)., DNB(OG)., Senior Consultant, Department of Obstetrics And Gynaecology, Preethi Institute of Medical Sciences, Madurai. *Corresponding Author

Dr Ramya. VR MBBS.,DNB (OG) ., Registrar, Department of Obstetrics And Gynaecology, Preethi Institute of Medical Sciences, Madurai. *Corresponding Author

Dr Ambigai Meena MBBS.,MD., DGO .,head of The Department, Department of Obstetrics And Gynaecology, Preethi Institute of Medical Sciences, Madurai.

ABSTRACT

PPH is the most common cause of maternal death worldwide. Despite the reduction of PPH using active management, about 1%–5% of births are complicated by severe PPH especially at rural areas where many lives are lost during transport to tertiary centres. Here we have a case 21 year old primigravida came in latent labour. She was taken up for emergency LSCS due to cervical dystocia. AMSTL followed. She had atonic primary PPH which failed to control with uterotonics. Bilateral uterine artery ligation done followed by b –lynch suture. She continued to bleed and uterus was completely atonic inspite of all the above mentioned. She was given multiple blood and blood products. Under aseptic precautions suction cannula was inserted intrauterine and her bleeding was kept under check. After a period of waiting for 20 minutes her uterus started to contract and bleeding started to decrease. She was monitored in surgical ICU vigilanty and received multiple blood transfusions. She had postoperative paralytic ileus early pulmonary Oedema, multi organ dysfunction which was successfully managed. She recovered well and was successfully managed conservatively and was discharged with intact uterus.

KEYWORDS

postpartum hemorrhage (PPH), suction cannula, obstetric hysterectomy, maternal mortality.

INTRODUCTION:

DEFINITION:

Worldwide about half a million women die as results of complications of pregnancy and childbirth [(1)]. Primary postpartum hemorrhage is the loss of more than 500 ml of blood within the first twenty-four hours of delivery or loss of any amount that is enough to cause hemodynamic instability in the mother or loss of more than 10% of the total blood volume. It is the most common form of postpartum hemorrhage.[(2)] Secondary postpartum hemorrhage, on the other hand is defined as bleeding in excess of normal lochia after twenty-four hours and up to six weeks postpartum. In both the true loss is often underestimated due to the difficulty with the visual quantification [(3)]. Here we have a case of primigravida with primary PPH with failed medical and surgical management, who was successfully managed with Suction cannula.

CASE REPORT:

A 21 year old primigravida, married since 1 year had spontaneous conception ,booked and immunised with no known comorbidities, came to hospital at 37 + 5 weeks period of gestation with mild lower abdominal pain. On examination no pallor, no pedal edema PR:86/min, BP:100/60mmhg. In view of poor bishop score she was induced with prostaglandin E2 gel. Labour was monitored for progress. she was taken up for emergency lscs due to cervical dystocia on 18/11/20 at 2pm.

LSCS was done under GA due to failed spinal anaesthesiaand she delivered healthy male baby of 3.4kg AMSTL followed. Placenta and membranes delivered in toto. Bleeding continued and uterus was found to be atonic. She was given Inj.oxytocin 40 units infusion, inj methyl ergometrine given intramuscularly. Her uterus was still atonic. Estimated blood loss was found to be around 1000ml and she was diagnosed with atonic primary PPH. .Inj. Prostaglandin f2alpha was given intramyometrially, Tab. misoprostol 1000mcg kept P/R, inj.tranexemic acid 1gram infusion given in series. Inj.prostaglandin f 2 alpha repeated after 15 min of first dose and one unit PRBC transfused. Uterus was still flabby and bleeding continued. Crystalloids and colloids infused. In view of failed medical management, she was proceeded with surgical management. Bilateral uterine artery ligation done followed by b –lynch suture. She continued to bleed and uterus was completely atonic inspite of all the above mentioned. She was given 2ndPRBC and 2 FFP on table. Under aseptic precautions SR cannula was inserted intrauterine and connected to suction and her bleeding was kept under check. After a period of waiting for 20 minutes her uterus started to contract and bleeding started to decrease. Uterine wound closed as uterus started to contract. Abdomen closed in layers.

Postoperatively POD 0 She was monitored in surgical ICU vigilanty for complications for the next 24 hours. She was conscious, oriented responding well. Her PR-120min, BP-110/70 mmhg, urine output maintained at 25-30 ml/hr for first 24 hours. She was started on higher antibiotic, mechanical thrombo prophylaxis given. Investigations repeated after 6 hours of surgery. 1 whole blood and 2 FFP transfused post operatively. Bleeding slowly decreased .Oxytotics discontinued after 24 hours. 70ml blood collected through suction in total after 24 hours. Patient Pulse rate was persistently above 120 -140 beats per minute for > 12 hours, a decrease of 20 beats noted with sedation. Ecg and Echo was done in view of persistant tachycardia and found to have good cardiac function and sinus tachycardia. cardiologist opinion sought and followed. After 24 hours of surgery, since uterus was contracted and bleeding decreased, Suction cannula removed under aseptic precaution as this could be a focus for infection.

On post operative day 1 mild abdominal distention noted. AG monitored and found to have slight increase. Bowel sounds were absent. USG abdomen showed minimal free fluid and no intrauterine collection. After 36 hours of surgery, she was noted to have persistent tachycardia >140 bpm and tachypnoea with RR-32 and spo2 maintaining at 96-98. During the next hour, RR increased to 40 and patient had a fall in saturation to 92%.She was started on NIV and furosemide infusion 5mg/hr with crystalloids. she was maintaining saturation above 96% with NIV. Patient was maintained on NIV for next 5 hours and slowly weaned to nasal prongs followed by room air.
On POD2, CT chest was done and found to be have early pulmonary oedema. She was started on hydrocortisone and Furosemide infusion continued as she continued to maintain urine output at 30-40ml/hr with IVF and diuretic. Blood investigations repeated showed hb -7.2gm with hypokalemia and hypoprotenemia. Potassium correction given, inj.vitamin k and protein supplements given.she was diagnosed with paralytic ileus and surgeon was involved. She was kept nil oral and mobilised. Prokinetics were added.

On POD3 Furosemide infusion stopped and shifted to oral potassium sparing diuretic. She was started on TPN., 4 units cryo transfused. She was started on pharmacological thromboprophylaxis with LMWH. Her bowel sounds resumed. She was started orally with clear liquids and slowly increased to soft diet. Bladder catheter removed.

On POD 5 repeat blood investigations were within normal limits. Dressing done, wound was healthy. Potassium and furosemide infusions stopped. Oral antibiotics were given. Tolerated orally well. She passed urine flatus and stool.

On POD6 She was shifted out of ICU and monitored in wards. Breast feeding established. She was successfully discharged on POD8 . Thromboprophylaxis continued for 2 weeks.

DISCUSSION:

Postpartum haemorrhage is found to be most critical situation after baby birth. As stated by WHO that 60% maternal deaths are occurring due to postpartum bleeding in under developed regions. 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. 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.

Management Of Pph:

Oxytocin is the drug of choice among all uterotonics for PPH caused by uterine atony. Prophylactically it is recommended to give 10 units oxytocin IM after delivery of the shoulders. Combination of other uterotonics like oxytocin , methergin, carboprost, misoprostol can be given to manage PPH. Recently Inj.Tranexemic acid also have been approved for the management of PPH along with uterotonics for PPH after THE WOMEN TRIAL[7]. All these drugs were given in our patient as a standard prophylactic and treatment measure after delivery.

In low resource settings unpredictable sudden massive bleeding makes it difficult to organize competent manpower, compatible blood, and transport to higher medical centers. Simpler techniques like uterine massage, uterotonic drugs, uterine packing, balloon tamponade and NASG (non pneumatic anti-shock garment) can be practiced in low resource settings during transportation to higher centers as a temporary measure[8]. Techniques like B-Lynch suturing, stepwise deva scularisation, internal iliac ligation and uterine artery embolization are available at tertiary care centers. As a life saving measure, peripartum hysterectomy is reserved for those whose PPH, which was failed to control with all the above mentioned.

These higher techniques are out of the reach to every parturient woman when simpler techniques fail. Sometimes the patients died on the way while being transported to higher centers due to hypovolemic shock. Sometimes women succumb to death just within 1-1.5 hours after the onset of bleeding[4]. The rapidity with which some women slip in to coagulation failure and multi organ dysfunction syndrome from haemorrhagic shock is alarming[4]. To overcome these complications of PPH, as a newer tool uterine suction Cannula was used. A specially designed uterine cannula measuring 25cm long and with 12/18mm diameter, with uterine angle, and with multiple perforations on uterine portion was used which is a simple, safe and cost effective technique.

SUCTION CANNULA MECHANISM IN PPH:

The strong negative suction produced in the uterine cavity by this special cannula resulted in sucking out all the blood and blood clots. The inner surface of the uterine cavity got strongly sucked by the cannula[5]. The suction was maintained for 30 min. All the bleeding vessels including arterioles and sinusoids get sucked into the holes of the cannula, thereby mechanically closing them. The bleeding points are permanently closed due to clot formation within 30–40 min. This is a very simple, safe, sure and inexpensive technique to control and cure PPH with absolute success. Instead of using suction machine, a mechanical suction unit of ventouse or MVA syringe can be used. There were no complications and no failure observed by using this device. This life-saving procedure will have a key role in bringing down maternal mortality[5].

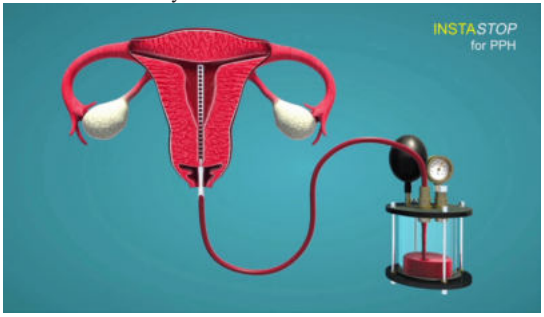

Figure 1: PPH cannula inserted into the post-partum uterus with PPH

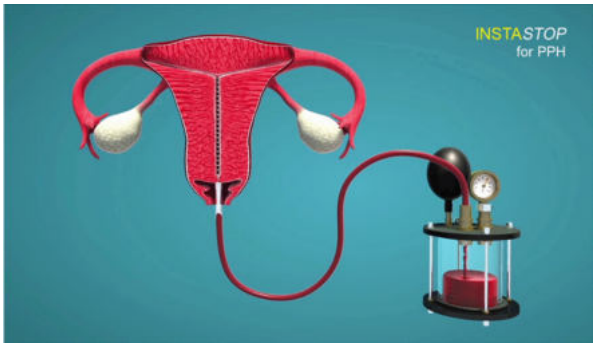

Figure 2: Uterus contracted well, and bleeding stopped completely

CONCLUSION:

PPH is a nightmare for any obstetrician with any amount of experience. PPH is best kept under control when diagnosed early, acted upon soon with appropriate management. Our patient had severe atonic PPH, with failed medical and surgical management. Inspite of these, this primiparous patient was lucky to have her uterus saved with this simple cost effective tool- suction cannula. Though postoperatively patient went in to mild multiorgan dysfunction which was expected as a result of severe hemorrhage and multiple transfusions, effective intensive care and multidisciplinary approach helped save this patient along with saving her future fertility. Suction cannula is a very useful tool that can be used both as a prophylactic measure and therapeutic tool to decrease PPH and prevent many women from having major blood loss and obstetric hysterectomy.

REFERENCE:

1. World Health Organization (2005) Attending to 136 Million Births, Every Year. Make Every Mother and Child Count. The World Report 2005. World Health Organization, Geneva, 62-63. [Citation Time(s):1]
2. Khan, K.S., et al. (2006) WHO Analysis of Causes of Maternal Death: A Systematic Review. The Lancet, 367, 1066-1074. http://dx.doi.org/10.1016/S0140-6736(06)68397-9 [Citation Time(s):2]
3. Magnann, E.F., Evans, S., Chauhan, S.P., Lanneau, G., Fisk, A.D. and Morrison, J.C. (2005) The Length of the Third Stage of Labor and the Risk of Postpartum Hemorrhage. Obstetrics and Gynecology, 105, 290-293. [Citation Time(s):1]
4. Why Mothers Die, Kerala - 2004-05: First Report of Confidential Review of Maternal Deaths: Edited by V P Paily, 2009. Pages 41, 61, 60.
5. Panicker TV. Panicker's Vacuum Suction Haemostatic Device for Treating Post-Partum Haemorrhage. Journal of obstetrics and gynaecology of India. 2017 Apr;67(2):150.
6. Ram HS. s on "Panicker's Vacuum Suction Hemostatic Device for Treating Postpartum Hemorrhage". The Journal of Obstetrics and Gynecology of India. 2017 Dec;67(6):454-5
7. Shakur H, Elbourne D, Gülmezoglu M, Alfirevic Z, Ronsmans C, Allen E, Roberts I. The WOMAN Trial (World Maternal Antifibrinolytic Trial): tranexamic acid for the treatment of postpartum haemorrhage: an international randomised, double blind placebo controlled trial. Trials. 2010 Dec;11(1):1-4.
8. Miller S, Martin HB, Morris JL. Anti-shock garment in postpartum haemorrhage. Best practice & research Clinical obstetrics & gynaecology. 2008 Dec 1;22(6):1057-74.