A Review On Techniques In Trend To Treat Postpartum Hemorrhage

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Abstract: Postpartum hemorrhage is a major cause of maternal mortality worldwide. It is an obstetric emergency which gets complicated through vaginal or caesarean delivery. According to the estimation of WHO (World Health Organization) nearly 14 million people suffer from PPH around the world, in which one death occurs every 4 minutes. Postpartum bleeding is defined as the loss of blood in which 500ml from female genital tract after the delivery of the fetus or 1000ml in caesarean section. The obstetric bleeding is divided into two categories that are the primary (within 24hrs of delivery) and secondary (after 24hrs and up to 6 weeks of delivery) This literature survey reveals the overview of causes, available treatments through first line therapy (medicines), second line therapy (surgeries) and recent development in the treatments are enumerated. It will be more informative for researchers and medical practitioners who are in search of bringing further advancement in this field.

Index Terms : PPH, Healthcare, Women,Obstetric emergency, Health, Factors.

1. INTRODUCTION
Postpartum hemorrhage is excessive bleeding after the child-birth. About one to five percent of women have postpartum hemorrhage. It occurs mostly after the removal of placenta. After the vaginal birth the average amount of blood loss is about 500ml. The amount of blood loss during caesarean birth is about 1000ml. Most of the postpartum hemorrhage occurs right after the delivery or it can occur later. The main cause of the hemorrhage is, after the delivery of the baby the uterus contracts (i.e tightening of uterine muscles) and the placenta expels. Once the placenta delivered, these contraction helps in compressing the bleeding in where the placenta was attached. Uterine atony occurs when the placenta does not contract strongly. Uterine atony is responsible for 80%of PPH. Due to this the blood vessels fled and the hemorrhage happens. If a piece of placenta remains, bleeding also likely occurs. Some greater risk for postpartum includes: Placenta abruption, placenta previa, prolonged labor, infection, obesity. Also due to some other factors like lesions in the cervix or vaginal tissues, tear in a uterine vessel, blood clotting disorders. Excessive and rapid blood loss can cause drop in the pressure and lead to shock. Many surgical, medical interventions are used. If the bleeding induces to third stage of labor it causes in two ways. Internal bleeding and external bleeding. External bleeding can be managed by doing uterine massage, misoprostol, ergot alkaloids, prostaglandins. Oxytocin that causes the uterus to contract. It is used to induce labour or strengthen labour during the child-birth and also to control the bleeding. Misoprostol used for preventing the PPH. But this drug related with more side effects than conventional uterotonic-drugs. Also ergometrine used to control the excessive bleeding following the child-birth. It acts on three different receptors attached on the walls of blood vessels and in the uterus. If the uterus not contract properly episiotomy is handled. Possibilities of internal bleeding are handled using many techniques. The treatment required for internal bleeding after labor depends on the underlying cause. For uterine atony, packing the uterus can help put pressure on the woman’s blood vessels and help to slow bleeding. Additionally, uterine massage can help strengthen muscle tone, swallowing the uterus to contract properly. When lacerations or hematomas are involved, sutures and compression can often help stop the bleeding. Medications delivered intravenously can help slow blood loss, while IV fluids can help to replace lost blood. In some cases, blood transfusions may be necessary; Balloon tamponade refers to the use of balloon which is inserted into the stomach, esophagus and it is inflated to stop the bleeding refractory When inserted into the stomach, the balloon catheters intended to arrest the bleeding from vascular structures. Each has its different volume capacities and ports tailored for the specific applications. It includes Sengstaken-blakemore tube, Linton tube and Minnesota tube. Major cause is the anemic condition. Due to the low red blood cell, the patient may attain death due to loss of red-blood cell. Postpartum hemorrhage occurs immediately sooner or later. Precaution method is needed and intervention method is handled. Healthcare provides right precaution method and helps to overcome the danger. do not underline.

2. RELATED WORK
Detailed submission guidelines can be found on the author resourcesThe most common and important cause of PPH is uterine atony [13]. The primary mechanism of immediate hemostasis is administration of uterotonic [1]. Placenta is retained to stop the bleeding, most often retained placental fragments is separated to stop the heavy bleeding and the products of conception. Hysterectomy is the treatment [2-3] handled to treat the patient. The cause in women is identified during immediate bleeding after the birth of the child and parallel resuscitation is handled. The postpartum hypertension found during the incidence is significantly lower when received carbetonics [4]. Compared with the women who received severe stage of pre-eclampsia[5] due to the hepatic capsules rupture. After the treatment if a women remains unresponsive or the amount of blood loss is less during the observed haemodynamic in-stability. It is recommended to investigate ultra sound scan for the possible intra-abdominal causes[10] Hemodynamic compromise condition more likely to occurs such as anaemia which is deficiency in iron and volume-contracted states. It also causes dehydration, gestational hypertension with the proteinuria [11]. Haemorrhage or excessive bleeding result in the loss of net volume in the intravascular the decrease in the oxygen content is delivered to the tissues and the organs. Physiological compensatory mechanisms include reflex tachycardia, peripheral vasoconstriction and the increased myocardial contractility helps to perfuse the tissues to maintain. Blood loss is increased leads to the results in the circulatory collapse and the organ damage in the end, eventually death [12-14]. 3rd stage labor caused due to the muscles of the uterus contract
downwards, the blood vessels that pass through the wall to the placental surface and the blood flow is stopped [15]. This action causes the placenta to remove from the uterine wall [16]. Promote the uterine contraction from the uterotonic to prevent the atony and speed the placenta delivery. Oxytocin, ergonovine and the misoprostol [17,18] are the uterotonic agent in preventing the 3rd stage of labor. The rapid access to imaging technology and interventional methods is handled [19-20].

Usage of magnesium sulphate to avoid multicolinearity. It also controls preeclampsia. Trial of different dose of oxytocin to prevent uterine atony. Demerit:– Studies involve only more number of women who delivered vaginally. Includes risk factors for uterotonics and chorioamnionitis are studied deeply. Brian T. Bateman, Md Mitchell F. Berman et al.[2] Discuss the common risk factors such as hypertensive diseases of pregnancy, multiple gestation, retained placenta, polyhydramnios etc. Usage of magnesium sulphate to prevent preeclampsia. The analysis had led to the introduction of relationship between PPh and hypovolemia, massive transfusion. The NIS data however lacks capturing details regarding clinically relevant variables. The conduct of analysis gives overall reasons for pph and that allows linking various factors. Gary A. Dildy Ill, Md. [3] Uterine Atony, Retained Placenta Fragments, Genital tract lacerations, uterine inversion, placenta accreta. Medical therapy is given through oxytocin. Ergot alkaloids, prostaglandins serve as a very good tool for treatment of PPh. Antibiotics such as cephalosporins are prescribed. The detailed research had given solution for variety of cases through both medical therapy and surgical methods all the measures to curb the postpartum bleeding is discussed. In this study the almost all the major reasons are studied. P. Reddy Rani, Jasmina Begum[4] Uterine Atony, Uterine trauma, Retained Placenta, adherent placenta, Coagulation abnormalities. Assessment of blood loss: Uterotonics – Oxytocin, ergometrine, carboprost, misoprostol. This detailed research had given solution for variety of cases through both medical therapy and surgical methods all the measures to curb the postpartum bleeding is discussed. In this study the almost all the major reasons are studied. P. Reddy Rani, Jasmina Begum[4] Uterine Atony, Uterine trauma, Retained Placenta, adherent placenta, Coagulation abnormalities. Assessment of blood loss: Uterotonics – Oxytocin, ergometrine, carboprost, misoprostol. Introduction of radiological management helps in avoiding hysterectomy. Prediction and assessment of blood loss remains the cornerstone for prompt and effective management of PPh. This study reveals all the possible immediate treatment to arrest bleeding after delivery. Mousa HA, et. al.[5] Role of misoprostol in exceeding the benefits of oxytocin infusion. Role of tranexamic acid and the effect in treating the bleeding. Role of misoprostol in exceeding the benefits of oxytocin infusion. Role of tranexamic acid and the effect in treating the bleeding. It provides info regarding the side effects of various use of misoprostol, oxytocin infusion, tranexamic acid. Compared misoprostol, oxytocin infusion is more effective. Dwight J. Rouse, MD, MSPH[6] Risk of pph by major factor i.e. Uterine atony and the body mass. Implementing the Routine Controlled Cord Traction. Higher-Dose Oxytocin after the delivery. Most effective factor for pph is known. Effect of higher dose of oxytocin and arterial embolisation is known. Effect of dosages of oxytocin and entire outcome of arterial embolisation is known. Muhammad Muzzammil Edhi, Hafiz Muhammad Aslam, Zehra Naqvi, Edhi et al.[7] Uterine atony by vaginal hematoma. Experiment based research that compares and produces the percentage of factors responsible for each type of case in pph.

A complete study from third stage of labour – secondary pph is studied. This study gives entire detail of different cause and management of pph through a detailed experiment. Rebecca H. Allen, MD, MPH[8] Uterine atony, lacerations, retained placenta acrera / increta/percreta, hypovolemia within 24 hrs of birth etc. Massive transfusion protocol, Methyl prostaglandin F2a is given for primary treatment. Confirmation of effect of tranexamic acid in treating pph in primary level effectively. The authors concluded that tranexamic acid should be given alongside uterotonics because it is safe, effective, and there were no adverse effects. Edwin Chandrarahan, Archana Krishna[9] Long time labour, multiple times pregnancy, obesity. Treatment through both therapy and surgical way is mentioned. First line drugs and second line drugs along with the side effects are clearly mentioned. It highlights the cause and diagnosis of PPh. Dean Leduc, MD, Ottawa ONTaya Senikas, MD, Ottawa ON et al.[10] Exhaustion in the muscle and Uterine. High oxytocin. Uterotonics, Oxytocin and ergonovine, Carbetocin, Misoprostol, Tamponade, B-Lynch technique. first line, second line, radiological method, surgical methods are clearly explained. Prevention and intervention method for PPh. Hazem El-Rafae and Charles Rodeck.[11] Uterine atony, cervical damage, retained placenta etc. Usage of misoprostol and improvement in the 3rd stage labour. Performing surgeries that include B- Lynch sutures, hysterectomy. Response to misoprostol is through vaginal and also oral. Usage of thermos and prostaglandins and use of other techniques

<table>
<thead>
<tr>
<th>Authors</th>
<th>Issue Approached</th>
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<td>Guillermo Carrol, Luciano Mignini.</td>
<td>Development of Episiotomy.</td>
<td>Very much useful in easy movement of baby in the vaginal canal without tears in the vagina, cervix</td>
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<tr>
<td>Janice M. Anderson</td>
<td>Uterine massage , Uterotonic Agents etc.</td>
<td>Concept of Tissue, Thrombin, Tone, Trauma is clearly mentioned.</td>
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<tr>
<td>Gowri Ramanathan, Sabar atnam Arulkumaran.</td>
<td>Medical management through therapies. Surgical management. Usage of Non pneumatic anti shock garment.</td>
<td>All the available prevention and treatment methods are discussed.</td>
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<td>RANCOGZ</td>
<td>Surgical:- Balloon tamponade , B- Lynch sutures, hysterectomy etc.</td>
<td>All possibilities and risk factors are explained.</td>
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Usage of misoprostol and improvement in the 3rd stage labour. Performing surgeries that include B- Lynch sutures, hysterectomy. Response to misoprostol is through vaginal and also oral. Usage of thermos and prostaglandins and use of other techniques. In the table 1 it has shown the issues addressed by other authors
3 CONCLUSION

PPH is a critical reason for maternal morbidity. We currently have new pharmacological and specialized improvements for counteractive action and treatment which can extraordinarily lessen its frequency and sequelae. More extensive utilization of thermostable prostaglandins like misoprostol and dispersal of learning about new tamponade strategies can limit its frequency furthermore, constrain its genuine sequelae. The security of the third phase of work, and the rate of PPH and its entanglements will stay connected in any case to the more extensive issues of concepitive wellbeing when all is said in done and all the more particularly to the subsidizing and preparing expected to raise the standard of care offered to ladies in labor in numerous parts of the world

REFERENCES

[1] Lusia A.Wetta, MD; Jeff M Szychowski Phd, Samantha seals “Risk Factors For Uterine Atony/Postpartum Haemorrhage Requiring Treatment After Vaginal Delivery” Lusia A.Wetta, MD; Jeff M Szychowski Phd, Samantha seals Published online 2013 Mar 15. doi: 10.1016/j.ajog.2013.03.011.
