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Increase of PPH among Pregnant Mother at Maternity Ward

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Abstract

Postpartum haemorrhage (PPH) has become a major cause for morbidity and mortality in the first 24hours following delivery. PPH is complication of delivery and most common cause for the maternity death, accounting for about 35% of all maternal death worldwide. These deaths have a major impact on the lives and the health of the families affected. The aim of treatment of PPH has some medical and non-medical prospects. In our research we got the interesting facts on how the medicines and the required facts are provided to the PPH caused women and how the mortality rate is decreased.

Keywords: Postpartum haemorrhage; Pregnancy; Blood; Uterine

Introduction

PPH has been declared by WHO {world health organisation} as one the most disastrous reason for the maternity death. The maternal mortality ratio in developing countries in 2015 is 239% of 100000 live births versus 12% of 1000000 live births in developed countries. [1-5] Thus, 99% of all maternity deaths occur in developing countries, whereas 1% in developed ones. Inside the countries, this rate also varies as per low income and less facilities in rural areas a high income and higher facilities in urban areas. WHO statistics suggests that 35% of maternal death is due to PPH. It can also kill a healthy woman in 2hours if she not treated. This PPH is of two types:

a. **Primary PPH:** If the blood is loss within the first 24hours of delivery and then stops then it is called as primary PPH.

b. **Secondary PPH:** If the blood continues to loss continuously 12 weeks after delivery is termed as secondary PPH.

Causes

Some causes of PPH are uterine atony, trauma, retained placenta and coagulopathy. Those causes are commonly referred as "4T's". Haemorrhage may occur before or after the placenta is delivered. The average amount of blood loss after the birth of a single baby in vaginal delivery is about 500ml (or about a half of a quart) and the average amount of blood loss for a caesarean birth is approximately 1000ml (or one quart).As per our research, 2%-4% in normal and 6% in caesarean cases uterine atony (Table 1) being the cause of about 50% cases. N.B. Uterine atony: It is also called as atony of uterus, is a serious condition after childbirth. It occurs when uterus fails to contract after the delivery of the baby, and this can lead to PPH. Every year about 14million women around the world are suffered from PPH (i.e. 26 women every minute). In a survey of INDIAN SAMPLE REGESTRATION SCHEME (ISRS) at 1998, about 30% of maternal death is been recorded due to PPH. And according to ISRS 20001-2003, it is increased to 38% of maternal deaths. Also, by Indian Council of Medical Research (ICMR). In 2003, PPH is the leading cause of maternal death. If the cause of bleeding is not uterine atony, then blood loss may be slower and clinical signs and symptoms of hypovolemia may develop over a longer time period.

Signs of hypovolemic shock resulting from blood loss are as following.

a. Fall in blood pressure (BP), {BP may be normal initially}

b. Palpitations, Tachylalia, Dizziness

c. Weakness, Sweating

d. Restlessness, Pallor

e. Oliguria (reduced urine volume)

PPH may also be aggravated by pre-existing anaemia.

Medication and diagnosis

This process can be done by following two ways:

Non-medical management

This process possesses of uterine massage, bimanual uterine compression, external aortic compression, uterine artery embolization and non-pneumatic anti-shock garments (Table 1). It can also be done by some following facts: Making a close observation to the pregnant women during childbirth and afterwards. All the consideration, about blood level, haemoglobin level, etc. In research, we got that the blood level of a body in (litres) is equals to the weight of the body in (Kg) divided by 12. Also, visually estimating of blood level can become a great harm/hazard to a pregnant woman in her future. Blood estimation. N.B. Some of the clinical examination during third stage labour are most needed, to avoid this PPH problem, some of them are: -

Assessment of uterine tone and size.

Inspection of placenta if delivered.

Manual exploration of uterus for plant.

Inspection of cervix and vagina for any injury.

Medical management

The main aim to treatment of PPH is to find and stop the cause of bleeding. Hence, for its treatment medicines are used to stimulate uterine contraction (Table 2) and removing pieces of the placenta that remain in the uterus. The following (Table 2) is based on the drugs used, their appearance, effect and side effects.

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Causes	Management for the causes
Uterine atony	Uterine massage
	Bimanual uterine compression
	Eternal aortic compression
	Balloon or condom tamponade
If surgical measures are instituted	Compression sutures
	Bilateral ligation of uterine arteries
	Bilateral ligation of internal iliac (hypogastric) arteries
	Hysterectomy
If placenta delivered is incomplete	Oxytocin
	Manual exploration to remove fragments
	Gentle curettage or aspiration
	If bleeding continues manage as uterine atony
If placenta is not delivered	Additional oxytocin in combination with controlled cord traction, if all placenta remained
	Manual removal with prophylactic antibiotics
If PPH occurred due to genital tract trauma	Excessive bleeding or shock with contracted uterus
	Look for genital tract trauma with repair of tars
	If bleeding continues administer tranexamic acid
Clotting disorder	Bleeding in the absence of above condition
	Treat for clotting disorder as necessary with blood products

Table 1: Management for the causes.

Name of the drug and its preparation	Drug action and effectiveness	Side effects and cautions
Oxytocin (posterior pituitary extract)	Acts between 2-3 minutes	No known contraindication for postpartum use
		No or minimum side effects
		If used for labour induction augmentation: do not give oxytocin until at least 6hours after last misoprostol dose
Misoprostol (E1 antilog prostaglandin)	Orally	No known contraindications for postpartum use, Shivering and trans lent elevated temperature are common
	Acts within 3-5 minutes	
	Peak serum concentration between 18-34 minute	
	Effect lasts for 75 minutes	
Symmetrise combination of 5Iu oxytocin plus 0.5mg ergometrine	Combined raid action of oxytocin and sustained action of ergometrine	Some cautions and contraindications as ergometrine
		Only for use in the postpartum
		Side effects: nausea, vomiting, headaches and hypertension
Ergometrine preparation of ergot	Acts within 6-7 minutes, B39Effects last for 2-4 hours	Contraindication in woman having history of hypertension, heart disease, retained placenta, pre-eclampsia, eclampsia
		Only for use in the postpartum
		Causes tonic contraction may become an increase risk of retained placenta
		Side effects: nausea, vomiting, headaches and hypertension
		Can't be used if drug is cloudy or has changed the colour

Table 2: Drug action and effectiveness.

History on its management starting and its execution

As per our research, there were many cases all over the world of PPH, but it came in vision of WHO, when a woman started PPH cure foundation [6]. In 1994, Martine Rothblatt (an American lawyer, author and entrepreneur) had an incident. Her young daughter was diagnosed with a fatal orphan disease called as pulmonary arterial hypertension (PAH). Rothblatt scold her telecom stockman started the $3 million PPH cure foundation to found PAH research. By 2002 the FDA had approved their drug for PPH and for the 1st time drug for PPH was introduced to the world. In 2004, it was declared that oxytocin with or without supplemental ergometrine, ergometrine alone, 15-methyl prostaglandin F2α, and misoprostol were the uterotonics used for reducing PPH. Further in 2009 and 2012 WHO makes guidelines for managing PPH mentioned curb tonic, recombinant factor VII a and tranexamic acid as possible therapeutic interventions for PPH [7,8]. N.B. Oxytocin was discovered in 1906 by Henry H. Dale and the concept was given in 1954 by Vincent du Vigneaud. Misoprostol was first discovered in year 1954 by Robert et al [9].

Results and Conclusion

As per research, women and adolescents are the main prospects of improving their own health. Everyone should aware of this health

education and equal participation in society. The couples should have the knowledge of regular check-ups and the male couples should be supportive in all prospects. During pregnancy, every woman should have a check-up over anaemia and if it presents, then should take the appropriate diagnosis for it, if this would not be diagnosed it can become a great hazard in the form of PPH in future. The relatives and guardians should encourage the pregnant woman to have institutional delivery, because ANMs cannot attend the woman in home deliveries, and this can be a harm, if the woman does not have access to every health facilities. PPH needed to be reduced by strengthening peripheral deliveries and increasing this in every country.

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