

## **Prevention of Post Partum Hemorrhage (PPH )**

Consensus Statement for Prevention of PPH

Reviewed at the Consensus group meeting at Amby Valley ,July ,2014

President FOGSI:Dr Suchitra Pandit

Guideline development Group : Meeting July 12,2014

Drafted by Dr Suyajna Joshi , Bellary

Dr. Sanjay Gupte,FOGSI Chairman of the GCPR (Obstetrics committee)

Dr. Indrani Ganguli (Vice President FOGSI)

Dr. Sheela Mane (Vice President FOGSI)

Dr. Uma Singh

Dr.Girija Wagh Chairperson Medical Disorders in Pregnancy Committee. (2012 15)

Dr.Parikhshit Tank

Presented by : Dr. Joshi Suyajna D. Bellary in November 2012

Committee Members (2012)

Dr Sanjay Gupte : Chairman GCPR Committee

Dr Nozer Sheriar

Dr. Haresh Doshi

Dr. Girija Wagh

Dr. Jayam Kannan

Dr. Sujatha Misra

Dr. Sundari Nandyal

Dr. Veerendrakumar C.M.

November : 2012

Discussed by Committee : 28<sup>th</sup> October 2012

Received by Core Committee : NOVEMBER 2012

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## **Chairperson's Note**

*"Little fire is quickly trodden out which being suffered, rivers cannot quench"*

*The Medical Disorders in Pregnancy Committee FOGSI would like to place on record its appreciation for the move to have a FOGSI consensus on vital issues. It is felt that the consensus will help promote the activities of FOGSI by stating clearly the stand of the Federation in issues which come up for discussion in many forums medical and non medical.*

It should be clearly understood that this consensus statement should not be misconstrued as mandatory rules to be followed by all gynecologists. Rather they should serve as a base upon which to build good practice with adequate leeway for specific situations, patients and providers.

The consensus is presented in the following format:

The statement is presented first and if required the context is placed after it. The section context was included as an explanation of the scientific logic behind the statement.

## **Background:**

Improving healthcare for women during childbirth in order to prevent and treat PPH is an essential step towards the achievement of Millennium Development Goal 5 (MDG 5). One of the most preventable tragedies for motherhood is postpartum hemorrhage (PPH).

Postpartum hemorrhage is the leading cause of maternal death worldwide, with an estimated mortality of 140 000 per year. In India PPH contributed to 38% of all maternal deaths. The majority of these deaths occur within 4 hours of delivery, which indicates that they are a consequence of the third stage of labor.

PPH results in morbidities in the form of interventions, anemia, and poor lactation, exposure to blood products, coagulopathy, organ damage associated with hypotension and shock and pituitary infarction (Sheehan's syndrome). Since all parturient women are at risk for PPH, care providers need to possess the knowledge and skills to practice active management of the third stage of labor (AMTSL) to prevent PPH and to recognize, assess, and treat excessive blood loss.

PPH can occur in 5.8 % of women in their first pregnancy. The risk of a first PPH in a second or third pregnancy is 4-5%. The risk of recurrence of PPH in a subsequent pregnancy is up to 15%.

## **1. Acknowledgement of the Problem.**

**FOGSI acknowledges the magnitude of the problem of maternal mortality and morbidity due to PPH.**

**FOGSI has a central role to play in improving the capacity of its members through safe, effective, feasible and sustainable strategies to prevent PPH to reduce maternal death and disability .**

### **Context:**

PPH is a major problem as has already been emphasized in the background section. Almost all the deaths and complications from PPH are preventable. The fact that deaths due to PPH in the developed world are much less implies that these are definitely preventable. Comprehensive Emergency Obstetric Care (Government of India Initiative) has shown 33% reduction in maternal deaths and AMTSL is an important component. AMTSL reduces the occurrence of severe PPH by approximately 60-70%. Since 2007 WHO recommendations have supported AMTSL as a critical intervention for PPH prevention and AMTSL has become a central component of the PPH reduction strategies. Therefore there is a need to promote awareness of AMTSL and importance of prevention of PPH.

## **2 What is AMTSL ?**

**Active management of third stage of labor (AMTSL) is a prophylactic, deliberate, effective intervention to ensure smooth expulsion of the placenta and prevention of postpartum hemorrhage .**

### **Context:**

The AMTSL consists of interventions designed to facilitate the delivery of the placenta by increasing uterine contractions and to prevent PPH by averting uterine atony .FOGSI recommends that Active Management of Third Stage of Labor (AMTSL) should be offered to all women during childbirth since it reduces the incidence of post-partum hemorrhage due to uterine atony.

### **3.Components of AMTSL**

**Components of the AMTSL primarily are administration of uterotonics ,controlled cord traction and uterine massage after the delivery of the placenta.**

#### **3.1 Administration of uterotonic.**

**FOGSI recommends administration of uterotonic agent within one minute of the delivery of the baby, after ruling out the presence of second fetus**

**3.1.1** Oxytocin 10 units administered intramuscularly is the preferred medication and route for the prevention of PPH in low-risk vaginal deliveries.

**3.1.2** Oxytocin 5 IU diluted to 5ml and given intravenously over 1 to 2 minutes can also be used

**3.1.3** Intravenous infusion of oxytocin 10-20 U in 500ml (150ml/hour) is an acceptable alternative or an additional method.

**3.1.4** If oxytocin is not available, Methylergometrine 0.2 mg intramuscular can be used

**3.1.5** Misoprostol 600 mcg orally/rectally can be used if injectable uterotonics are not available.

**3.1.6** Physiological prevention of PPH –nipple stimulation or early breast feeding is advocated **as a possible adjuvant method**

Administration of misoprostol should be reserved for situations when safe administration and/or appropriate storage conditions for injectable oxytocin and ergot alkaloids are not possible. The uterotonics should be stored in appropriate manner. (Appendix 1 : ref table uterotonics )

Context:

A bolus dose of oxytocin may possibly be inappropriate in some women with major cardiovascular disorders.

#### **3.2 Controlled cord traction**

**FOGSI recommends controlled cord traction.**

**3.2.1** Clamp the cord close to the perineum .Place the other hand just above the woman's pubic bone and stabilize the uterus .Hold the cord and await a strong uterine contraction (2-3minutes).Pull the cord downwards with continuous counter pressure on the uterus directed upwards and deliver the placenta.

**3.2.2** If the placenta does not descend during 30-40 seconds of controlled cord traction do not continue to pull on the cord. Wait until the uterus is well contracted again and repeat procedure.

***“Never apply cord traction (pull down) without applying counter pressure (push up )”***

**3.2.3.** As the placenta delivers hold the placenta in two hands and gently turn it until membranes are twisted .Slowly pull to complete the delivery

**3.2.4** Examine the maternal and the fetal surface of the placenta and the membranes .If a portion of the maternal surface is missing or there are torn membranes with vessels, suspect retained placenta fragments and take appropriate action.

### **3.3 Uterine massage**

**FOGSI recommends uterine massage immediately after placental delivery until the uterus is contracted.**

**3.3.1** Check to see if the uterus is soft. Locate the fundus by pressing the side of the hand firmly into the mother's abdomen, just above the navel. Curve the hand downward to feel the top of the uterus or fundus. See if the uterus is hard like forehead or soft like nose. If it is soft, massage firmly in a circular motion until the uterus feels hard like a forehead and the bleeding slows. Massage a soft uterus and check mother's bleeding at the same time. If the uterus was hard, but is now soft, check the bladder for fullness. Help the mother to empty her bladder if it is full. If she is still bleeding explore for cervical and vaginal tears.

**3.3.2** Palpate for a contracted uterus every 15 minutes for one hour. Repeat uterine massage as needed. Ensure that the uterus does not become relaxed (soft) after you stop uterine massage.

### **3.4 Refocused approach**

FOGSI recommends refocused approach based on updates and recent evidences

**3.4.1** FOGSI recommends delayed cord clamping. Delay cord clamping at least by 30-40 seconds to reduce incidence of neonatal anemia. Early clamping may be required if there is placenta praevia, Rh negative mother or vasa praevia, tight nuchal cord or if the baby is asphyxiated and requires immediate resuscitation.

**3.4.2** Postpartum abdominal uterine tone assessment for early identification of uterine atony is recommended for all women.

**3.4.3** FOGSI recommends continuous supply of high quality oxytocin and cold chain for storage (Appendix 2: ref table: storage of uterotonics )

## **4. PPH prevention in Cesarean section**

FOGSI recommends active management to prevent PPH in cesarean sections.

**4.1** Oxytocin (IM/IV diluted) is the recommended uterotonic drug for the prevention of PPH in cesarean section. Oxytocin 10 units IM is recommended. If administered intravenously it should be given in a dose of 5 units diluted to 5ml over 1 minute. Intravenous infusion of oxytocin 10-20 U in 500ml (150ml/hour) is an acceptable alternative

**4.2** Cord traction is the recommended method for removal of the placenta in cesarean section.

**4.3** The principles for cord clamping are same as mentioned above (3.4.1)

### **Context:**

The blood loss during cesarean sections is more than in a vaginal delivery. Accurate assessment of blood loss at cesarean section is difficult. Both average blood loss and risk of PPH are greater with caesarean section operations. With the rise in cesarean section rates over the past decade it is important that all clinicians are aware of the prevention, early recognition and treatment of PPH.

## 5. PPH prevention in special situations

**FOGSI recommends awareness and individualization of management in special situations such as multifetal pregnancy, VBAC and other high-risk pregnancies. There is little evidence on best practice in these situations**

**5.1** In cases of multifetal pregnancy, all fetuses must be delivered prior to administration of oxytocic drugs to avoid intrauterine asphyxia.

**5.2** Methyl ergometrine should not be given to women with hypertension, cardiac disease, severe anemia and Rh negative mothers.

**5.3** Injectable prostaglandins can be used in special situations where women are at high risk of PPH. However it should not be given in women with bronchial asthma and heart disease

**5.4** Misoprostol is a PGE<sub>1</sub> and is safe in bronchial asthma and heart disease

## 6. Be on Guard

**FOGSI recommends close monitoring of the parturient as in spite of AMTSL she may develop PPH.**

### Context :

Even with major advances in prevention of PPH, some women still require treatment for excessive bleeding. Timely interventions and appropriate access or referral and transfer to basic or comprehensive emergency obstetric care facilities for treatment is essential for saving lives of women.

### Summary :

AMTSL should be offered to all delivering women. Oxytocin is the drug of choice for AMTSL in preference to other oxytocics (Appendix 2 : ref table uterotonics) . Evidence based prevention of PPH can be achieved with the use of relatively safe and effective measures. Women should be vigilantly monitored during the first hours after delivery of the baby and the placenta. Attention should be paid to the oxytocin cold chain

### Appendix 1. Reference table: Uterotonins dosages

Drug	Dosage route of administration	Action	Side effects	Caution
Oxytocin	10 U IM 5 U IV diluted to 5 ml over 1-2 mins slow 20 U in 500ml NS/RL infusion @ 150 ML/hour	Onset 2-3 mins Lasts upto:15-20 mins	None or minimal	direct IV oxytocin contra indicated in cases of cardio vascular failure and heart diseases.
Misoprostol	600 mcg oral/SL/PR	Onset 3-5 mins. Peak 20-30 mins Lasts upto:75 mins	Shivering ,slight rise in temperature	No contraindications
Ergometrine	0.2 mg IM	Onset:2-7mins Lasts 2-4 hours	May increase risk of retained placenta ,nausea vomiting, headache ,hypertension	Avoid in hypertension, heart disease, Rh negative mothers
Carboprost	250 mcg IM	Onset: 1-2 mins Lasts 15-20 mins	Vomiting, diarrhea ,bronchospasm	Avoid bronchial asthma

## Appendix 2. Reference table : Storage of Uterotonins

Oxytocin	Storage: 2-8°C, the preferred storage of oxytocin is refrigeration but it may be stored at temperatures up to 30 °C for up to 3 months without significant loss of potency.
Carboprost	Requires special storage conditions: 2-8°C
Methyl ergometrine	Requires special storage conditions: 2-8°C, protection from light & freezing

## References

### Source References for review

1. WHO recommendations for the prevention and treatment of post partum haemorrhage - 2012
2. FIGO-ICM Joint Statement Management of the Third Stage of Labour to Prevent Post-partum Hemorrhage, 2003.
3. Prevention and management of postpartum hemorrhage, Green Top Guideline No. 52 May 2009 (Minor revisions November 2009 and April 2011)
4. Active Management of the Third Stage of Labour: Prevention and Treatment of Postpartum Hemorrhage SOGC guideline No.235, October 2009
5. Prevention and treatment of postpartum hemorrhage in low-resource settings- FIGO GUIDELINES, International Journal of Gynecology and Obstetrics Volume 117, Issue 2, May 2012, Pages 108–118
6. Booklet for facilitators of Helping Mothers Survive initiative of Jhpeigo.

Good Clinical Practice Recommendations are based on the clinical experience of the guideline development group.