Approved by Quality & Patient Safety Committee
19 December 2013

THIRD STAGE MANAGEMENT FOLLOWING VAGINAL BIRTH

This LOP is developed to guide clinical practice at the Royal Hospital for Women. Individual patient circumstances may mean that practice diverges from this LOP.

1. AIM
- Delivery of placenta and membranes
- Prevention of postpartum haemorrhage (PPH)

2. PATIENT
- Woman in the third stage of labour following the vaginal birth of the baby until delivery of placenta and membranes

3. STAFF
- Registered midwives
- Medical staff
- Student midwives
- Medical students

4. EQUIPMENT
- Needle
- Syringe
- Abdominal sponges
- Suturing equipment
- 16 g Intravenous (IV) Cannula
- Urinary Catheter / Bedpan

5. CLINICAL PRACTICE
- Offer and recommend to all women active management of third stage of labour antenatally and again when in labour
- Obtain verbal consent for women who agree to active management for third stage
- Perform risk stratification for woman antenatally, intrapartum and postpartum and define woman as low risk or high risk for PPH according to table below (Appendix) and document in Integrated Clinical Notes

Active management of third stage
- Take Oxytocin from fridge and draw up at the bedside when birth is imminent
- Check dose of Oxytocin with either a registered midwife or medical officer
- Administer 10 units of Oxytocin intramuscularly (IM) after the birth of the anterior shoulder (as per standing orders)
- Encourage delayed umbilical cord clamping for at least 1 minute for term newborn infants not requiring resuscitation
- Guard the uterus by placing a hand suprapubically and apply steady cord traction until placenta is visible at the introitus then support delivery of placenta and membranes
- Do not apply increased traction to cord if resistance is felt
- Discuss ongoing management with the obstetric registrar if the placenta and membranes have not been delivered within 20 minutes, or if the blood loss is ≥500ml

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- Retained Placenta :
    - Ensure the bladder is empty
    - Insert IV cannula and send blood for Group and Hold and full blood count
    - Administer Oxytocin Infusion (add 40 Units of Oxytocin to 1 litre of Normal Saline (Sodium Chloride 0.9%) and run at 250 mls/hour)
    - Reassess separation of placenta
    - Aim for manual removal of the placenta within a further 30 minutes. The amount of blood loss will determine the speed of the removal
    - Consider performing manual removal in the Delivery Suite if an epidural is in-situ and effective, after notifying the anaesthetic registrar

For high risk women (See Appendix) :

- Recommend additional active management of third stage:
    - EITHER Ergometrine (if no contraindications), 250 micrograms IM or IV after expulsion of the placenta
    - AND/OR Oxytocin infusion (add 40 Units of Oxytocin to 1 litre of Normal Saline (Sodium Chloride 0.9%) and run at 250 mls/hour)
- Recommend in labour:
    - IV cannula
    - Blood group and hold
    - Full blood count

Physiological management of third stage:

- Advise woman that the risk of a PPH is twice as likely if they decline active management of third stage
- Await spontaneous delivery of the placenta and membranes following birth of the baby. Do not pull on the cord or apply fundal massage, however, maternal effort may be appropriate
- Encourage woman to adopt upright position, to breastfeed baby and to empty her bladder
- Delay clamping and cutting of the umbilical cord for at least one minute, until the cord stops pulsating or when the placenta and membranes have been delivered, depending on the mother's request. Consider delayed umbilical cord clamping for 30 seconds after the birth of the preterm baby not requiring resuscitation
- Recommend administration of 10 units of Oxytocin IM and discuss with the obstetric registrar if the placenta and membranes have not been delivered within 30 minutes, or if the blood loss is ≥500ml
- Plan ongoing management with the obstetric registrar if the placenta and membranes have not been delivered within 30 minutes of giving Oxytocin or if the blood loss is ≥500ml

For all women:

- Measure and document blood loss as accurately as possible
- Follow PPH local operating procedure if blood loss is ≥500ml
- Palpate uterus at completion of third stage to ensure it is contracted and express clots where necessary
- Check the perineum, vagina and vulva for vaginal bleeding and tears, immediately following the delivery of the placenta and arrange repair if required as soon as possible
- Perform regular assessment of blood loss, the uterine fundus, heart rate and blood pressure in the delivery room for 2 hours after delivery, ensuring the fundus is firm and central
- Ensure woman who is at high risk of PPH is handed over to appropriate staff when patient moves from Birthing Services to theatre and or Postnatal Ward
- Offer and encourage breastfeeding

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6. DOCUMENTATION

- Partogram
- Integrated clinical notes
- ObstetriX
- Medication chart
- Fluid balance chart and IV order chart

7. EDUCATIONAL NOTES

- Management of the third stage should be discussed in the antenatal period with the woman so she can make an informed decision prior to labour
- When compared to physiological third stage, active management of the third stage has been proven to reduce severe PPH >1000ml by 70% and is the most effective way of preventing postpartum haemorrhage. For low risk women there is less evidence that active management of the third stage is of benefit in preventing severe PPH
- Timing of cord clamping is not likely to have a major effect on blood loss
- Omission of controlled cord traction in active management of third stage has little effect on the risk of severe haemorrhage, however increases the duration of the third stage of labour on average from 6 minutes to 12 minutes, and may lead to an increase in the rate of manual removal of placenta
- Oxytocin is the drug of choice for management of third stage with the advantage of rapid onset and lower risk of side effects. It does not increase the risk of retained placenta or lengthen the duration of the third stage
- Syntometrine (Ergometrine Maleate and Oxytocin) is associated with a small but statistically significant reduction in PPH where blood loss is < 1000mls. This advantage needs to be weighed against the adverse effects of nausea, vomiting, hypertension, headache, dizziness, abdominal pain, cardiac arrhythmias and chest pains. Syntometrine 1 ampule IM (Ergometrine 500 mcg and Oxytocin 5 units) could be given (if no contraindications) after expulsion of the placenta, or with anterior shoulder or birth of the baby, instead of Oxytocin 10 units
- Ergometrine and Syntometrine are associated with vomiting, and antiemetics should be considered
- Contraindications for Ergometrine include ergot alkaloid hypersensitivity; retained placenta; eclampsia, pre-eclampsia, severe or persistent sepsis; peripheral vascular disease, heart disease; hypertension including a history of hypertension; impaired hepatic, or renal function. Precautions for ergometrine include: Calcium deficiency; Coronary Artery Disease; porphyria; venoatrial shunts, mitral valve stenosis; IV administration (especially rapid or undiluted)
- For healthy term infants, delayed cord clamping probably increases birth weight, haemoglobin at 24 to 48 hours and iron stores at three to six months. In the 2013 Cochrane systematic review "Effect of timing of umbilical cord clamping of term infants on maternal and neonatal outcomes" those with delayed clamping had improved iron status through early infancy but were more likely to receive phototherapy[5]. Delayed cord clamping is likely to be beneficial as long as access to treatment for jaundice requiring phototherapy is available. Phototherapy may require admission to Special Care Nursery and separation of mother and baby. There is insufficient evidence to support or refute a recommendation to delay cord clamping in babies requiring resuscitation

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- In the 2013 Cochrane review of term babies there were no significant differences between early versus late cord clamping groups for the primary maternal outcome of severe postpartum haemorrhage (risk ratio (RR) 1.04, 95%confidence interval (CI) 0.65 to 1.65; five trials with data for 2066 women with a late clamping event rate (LCER) of ~3.5%, I2 0%) or for postpartum haemorrhage of 500 mL or more (RR 1.17 95% CI 0.94 to 1.44; five trials, 2260 women with a LCER of ~12%, I2 0%)[5]
- The updated Cochrane Review "Effect of timing of umbilical cord clamping and other strategies to influence placental transfusion at preterm birth on maternal and infant" (2012), delaying cord clamping was associated with fewer infants requiring transfusions for anaemia, less intraventricular haemorrhage and lower risk for necrotising enterocolitis compared with immediate clamping[8]. The concerns this review makes in its summary is the small total number of infants < 30weeks gestation, the wide confidence intervals and the unclear risk of bias in the studies to date. There is also no long term follow-up of the infants. The recommendation is that further larger trials need to be conducted. There are limited data on the hazards or benefits of delayed cord clamping in the non-vigorous infant.
- When performing delayed cord clamping the aim should be to hold the preterm infant at a level below the vulva and then place the baby on the mother's abdomen. Babies born by caesarean section can be placed in the mother's lap before clamping
- In term infants, cord clamping is usually delayed until the cord stops pulsating (usually within the first two minutes of birth) or until the placenta is delivered[1]. The position of the term baby is left to the discretion of the accoucheur and parents wishes.

8. RELATED POLICIES / PROCEDURES / CLINICAL PRACTICE LOP

- Post Partum Haemorrhage Prevention and Management
- First Stage of Labour Care recognition of Normal Progress and Management of Delay
- Second Stage of Labour Care recognition of normal progress and management of delay
- Perineal Repair
- Labelling of Injectable Medicines Fluids and Lines
- NSW Health Policy Directive. Maternity - Prevention, Early Recognition and Management of Postpartum Haemorrhage (PPH) 2010. PD2010_064

9. REFERENCES

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REVISION & APPROVAL HISTORY

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APPENDIX

RISK FACTORS FOR PPH REQUIRING ADDITIONAL PROPHYLAXIS:

Approximate odds ratio for PPH (99% Confidence Interval)	
Suspected or proven placental abruption	13 (7.61 – 12.9)
Multiple pregnancy	5 (3.0-6.6)
Retained placenta >30 minutes	5 (3.36-7.87)
Pre eclampsia / gestational Hypertension	4
Birth by emergency Caesarean Section	4 (3.28-3.95)
Previous PPH	3
Operative vaginal birth / Shoulder Dystocia	2 (1.56-2.07)
Prolonged labour > 12 hours	2
Second stage of labour >2 hours	
Von Willebrand's disease	
Anaemia (< 9g/L)	2 (1.63 -3.15)
Grand multi-parity	

OTHER RISK FACTORS FOR PPH (CONSIDER ADDITIONAL PROPHYLAXIS):

Additional Prophylaxis should be considered where any of these risk factors exist, particularly in the case of multiple risk factors.

Asian Ethnicity
Obesity (BMI >30)
Induction or augmentation of labour
Baby weight >4 kg
Pyrexia in labour
Age >40
Precipitate labour
Multiple or large fibroids
Polyhydramnios