

**Government of West Bengal**  
**Department of Health & Family Welfare**  
**State Family Welfare Bureau**  
**Swasthya Bhawan,**  
**GN 29, Sector V, Salt Lake, Kolkata-700091**

No. H/SFWB/1L-01-2013/ 2113(53)

Date ..... 17/12/....., 2013

To

- 1-13) The Principal/Director, IPGMER, Kolkata MCH, NRS MCH, R G Kar MCH, CNMCH, Sagar Dutta MCH, Medinipur MCH, Burdwan MCH, BSMCH, Murshidabad MCH, Maldah MCH, North Bengal MCH, Kalyani MCH  
14-26) The MSVP, IPGMER, Kolkata MCH, NRS MCH, R G Kar MCH, CNMCH, Sagar Dutta MCH, Medinipur MCH, Burdwan MCH, BSMCH, Murshidabad MCH, Maldah MCH, North Bengal MCH, Kalyani MCH  
27-52) The CMOH, North 24 Parganas, Basirhat, Howrah, Hooghly, Nadia, South 24 Parganas, Diamond Harbour, Purba Medenipur, Birbhum, Rampurhat, Bankura, Bishnupur, Puruliya, Paschim Medenipur, Jhargram, Murshidabad, Bardhaman, Assansole, Malda, Uttar Dinajpur, Dakshin Dinajpur, Jalpaiguri, Coochbehar, Darjeeling Health District,  
53) The DFWO, Kolkata,

**Subject: Labour Room Protocol**

Enclosed herewith please find "Labour Room Protocol" prepared by Dr Tridib Banerjee, Chairman, HLTF along with Prof. D Bhattacharya, Principal, Sagar Dutta MCH, Prof. Md Alauddin, Dept. of G & Obs, Medenipur MCH & Dr S Chakraborty, Associate Professor, Kolkata MCH.

This "Labour Room Protocol" must be made available to every service provider attached to Labour Room/ Maternity ward of all MCH, District Hospital, S D/ S G Hospital, Decentralised Hospitals, Rural Hospital, Block PHC, 24 X 7 PHC and other PHC in the state with instruction to follow the protocol strictly.

  
**Commissioner, Family Welfare &  
Secretary to Govt. of West Bengal,**

No. H/SFWB/1L-01-2013/ 2113(53)/1(20)

Date ..... 17/12/....., 2013

Copy forwarded for kind information to:-

1. Dr. Tridib Banerjee, Chairman, HLTF
2. DHS & e.o secretary , Govt. of West Bengal
3. DME & e.o. secretary, , Govt. of West Bengal
4. Mission Director, NRHM, West Bengal.
5. SFWO, West Bengal
6. Prof. D Bhattacharya, Principal, Sagar Dutta MCH,
7. Prof. Md Allauddin, Dept of G & Obs, Medenipur MXCH,
8. Dr S Chakraborty, Associate Professor, Kolkata MCH,
9. Jt. DHS (FW), West Bengal
10. DDHS (MCH), West Bengal
11. Dr. Sikha Adhikary, DDHS, West Bengal
12. ADHS (Maternal Health), West Bengal
13. DADHS (Child Health), West Bengal
14. Dy. CMOH III (All Health Districts)
15. DMCHO (All Health Districts)
16. Programme Officer-I, NRHM, West Bengal
17. Programme Officer-II, NRHM, West Bengal
18. Coordinating Officer, FBNC Cell.
19. Sr. PA to Principal Secretary of this Department
- ✓ 20. System Coordinator, IT Cell with a request to post a copy of this memorandum in the departmental Web Site,

  
**Commissioner, Family Welfare &  
Secretary to Govt. of West Bengal,**

## **Instruction for using labour room protocols:**

1. Do a rapid initial assessment to diagnose any condition which need immediate attention e.g- imminent delivery, eclampsia, active bleeding per vagina, shock etc.
2. Always observe infection prevention practices while providing clinical care
  - Change shoes in labour room
  - Wear protective apron
  - Wash hand before and after patient examination following six steps
  - Wear sterile glove before examination
  - Decontaminate glove in .5% chlorine solution after examination
  - Decontaminate all used instruments in .5% chlorine solution before washing
  - Dispose of all waste materials according to colour coding
  - Clearance of waste basket during each duty shift along with swabbing of labour room floor.
3. Diagnose a patient in shock and manage according to protocol (Page 1)
4. Diagnose a patient in labor and manage according to protocol (Page 1)
5. Shift the patient in active phase of labor and manage according to protocol (Page 2)
6. Manage second stage of labor and manage according to protocol using a partograph and never use misoprostol tablet oral/ vaginal without a record (Page 2)
7. Provide active management of 3<sup>rd</sup> stage of labor to ALL mothers according to protocol (Page 4)
8. Manage immediate post partum period according to protocol (Page 5)
9. Diagnose and manage PPH and other third stage complication according to protocol (Page 8)
10. Diagnose and manage severe pre eclampsia and eclampsia according to protocol (Page 5)
11. Follow therapeutic antibiotic protocol in sepsis cases according to protocol (Page 13)
12. Follow PPTCT protocol
  - Counsel all mothers for HIV testing
  - If tested reactive husband should be counseled
  - Provide Nevirapine prophylaxis( single tablet 200 mg) to all reactive mothers at the onset of labour/ before cesarean section
  - Provide Nevirapine prophylaxis to all babies of reactive mothers (syrup: 0.1 mg/kg body weight)
  - Do not apply any identification tag on a reactive mother or baby.

Dated 22/11/13 Md. Haquddin Soniqa Chauhan  
22/11/13

J. S. 22/11/13

## Labour Room Protocols

## 1. Shock

- ❖ Collapse of circulation resulting in critical reduction of tissue perfusion.
  - ❖ Life threatening.
  - ❖ Needs urgent and intensive treatment.

**Anticipate/expect shock in obstetrics when there is:**

- Bleeding (abortion, ectopic, APH, PPH )
  - Infection ( septic abortion, puerperal sepsis)
  - Trauma (rupture uterus, uterine inversion)

#### **Initial Management:**

- Shout for help
  - Rapidly evaluate vitals
  - Resuscitate if needed
  - Start O<sub>2</sub> inhalation
  - Ensure patent airway
  - Rapid IV fluid with RL

#### **Diagnosis:**

- Restlessness, confusion, unconsciousness, sweating
  - Cold and clammy skin
  - Fast and weak pulse, low blood pressure
  - Subnormal temperature
  - Rapid breathing, pallor
  - Oliguria

Management: At BEmOC

- Mobilize help.
  - Oxygen inhalation (6 – 8 litres/min).
  - Ensure patent airway (turn onto her side),
  - Raise foot end.
  - Keep the woman warm.
  - Rapid infusion of ringer lactate (1<sup>st</sup> choice)/normal saline to restore blood volume.  
(1 liter in 20 minutes)- start two IVline
  - Inj. Morphine sulphate 15 mg IM.
  - Steroid hormones-Inj. Hydrocortisone (500-1000 mg) is useful in all types of shock.
  - Catheterize the bladder.
  - Monitor vital signs for evidence of improvement.
  - Manage the specific cause for shock.
  - Refer to higher centre for further management if needed (e.g., of specific cause) & blood transfusion if needed (with donor).

At CEmOC

- General management of shock is as in BEmOC.
  - Transfuse as necessary.
  - Treat the specific cause as early as possible and suitable.
  - Monitor for evidence of improvement.

## **2. Diagnosis of Labour:**

- Anticipate labour if the woman in third trimester of pregnancy has
    - Painful intermittent uterine contraction with increasing frequency and intensity

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27/11/13

*A. J. James*

- Watery vaginal discharge / sudden gush of water
- Confirm onset of labour if there is
  - Regular, painful uterine contractions of > 20 secs duration and at least once every 10 mins.
  - Progressive cervical dilatation and effacement or
  - Cervical dilatation of  $\geq 4$  cms

Stages and phases of labour:

- First Stage-
  - Latent phase – cervix  $< 4$  cm : 8 hours
  - Active phase – cervix  $\geq 4$  cm : 4-6 hours
  - Dilatation rate  $\geq 1$  cm/ hour
- Second Stage- cervix -10 cms
- ❖ If cervix is not dilated at initial examination and
  - Pain persists – reexamine after 6 hours. If there is effacement and dilatation – diagnose labour. If still no cervical change – diagnose false / pre-labour.
  - Pain subsides- observe for 24 hours.

### **Obstetric care and management:**

- Careful monitoring of
  - Progress of labour
  - Foetal wellbeing
  - Maternal wellbeing
- Early identification of abnormality/complication
- Timely intervention.

### **3. Care during latent phase:**

- Note –
  - Pulse : 2 hourly
  - Respiration, temperature and B.P.; 4 hourly
  - Uterine contraction: 1-2 hourly
  - F.H.S.: hourly
  - Descent: before each P/V examination.
  - Cervical dilatation and effacement, station of head and character of liquor (if membranes ruptured) at each P/V examination (6 hours after initial assessment).
  - Protein and acetone in urine when passed.
- Intervention only for specific indication, e.g. Foetal distress

### **4. Care during active phase:**

Start plotting on partograph all events of labour once the woman is in active phase. The WHO partograph is modified by excluding the latent phase and beginning plotting at 4 cm cervical dilatation in active phase to make it simpler and easier to use. Record the following on the partograph.

#### **Using the Partograph:**

Patient information:

Fill out name, para, hospital number, date and time of admission, and time of rupture of membranes or time elapsed since rupture of membranes (if rupture occurred before charting on the partograph began).

Foetal heart rate: Record every half hour.

*[Signature]*

Md. Md. Hossain  
22/11/13

*Sonajhi  
Chittagong*  
22/11/13

*G. Sengupta*

**Amniotic fluid:** Record status of membrane & the colour / nature of amniotic fluid at every vaginal examination:

- " I: membranes intact
- " C: membranes ruptured, clear fluid
- " M: meconium stained fluid
- " B: blood stained fluid
- " A: liquor absent

**Moulding:**

- " 1+: Sutures apposed
- " 2 +: Sutures overlapped but reducible
- " 3+: Sutures overlapped and not reducible

**Cervical dilatation:** Assessed at every vaginal examination and marked with a cross (x). Begin plotting on partograph at 4 cm cervical dilatation. Expect 1 cm or more / hour dilatation thereafter.

**Alert line:** A line starts at 4cm of cervical dilatation to the point of expected full dilation at the rate of 1 cm per hour. With normal progress, the cervicograph will remain on or to the left of the alert line.

**Action line:** Parallel and four hours to the right of the alert line.

**Descent assessed by abdominal palpation:** Recorded as a circle (O) at every abdominal examination. At 0/5 the sinciput is at the level of the symphysis pubis.

**Hours:** Refers to the time elapsed since onset of active phase of labour (observed or extrapolated)

**Time:** Record actual clock time.

**Contractions:** Chart every half hour. Count the number of contractions in a 10 minutes time period, and their duration in seconds

- Less than 20 seconds
- Between 20 and 40 seconds
- More than 40 seconds

**Oxytocin:** Record the amount of oxytocin per volume IV fluids in drops per minute every 30 minutes when used.

**Drugs given:** Record any additional drugs given.

**Pulse:** Record every 30 minutes and mark with a dot (.)

**Blood pressure:** Record every 2 hours and mark with arrows.

**Temperature:** Record every 2 hours.

**Protein, acetone and volume:** Record when urine is passed.

## **5. Management of second stage of labour**

**Diagnosis of Second Stage:**

- Urge to defaecate.
- Urge to bear down.
- Membranes spontaneously rupture.
- Cervix is no longer palpable i.e. fully dilated.

**Conduct of Delivery:**

- Shift the patient to the delivery table, if such transfer is needed, when second stage is diagnosed.
- Monitor FHR every five minutes.

*Md. Hafizuddin  
22/10/13*

*Somanya  
CMBRHS*

*GK Sami*

- Put her on the position of her choice – preferably in dorsal or semi-recumbent position.
- Maintain cleanliness.
- Wash perineal area with an antiseptic solution and use sterile/clean drapes.
- When head is crowning the perineum, decide as to the need of episiotomy or otherwise (neither routinely required nor to be routinely avoided).
- If needed make a mediolateral episiotomy.
- When occiput hinges below symphysis pubis, apply gentle downward pressure to the occiput with left hand to prevent sudden extension while a pad in the other hand supports the perineum to enable controlled delivery of head rather than a sudden pop out.
- Once head is delivered, palpate foetal neck for any loop of cord. Slip it over the head if loose; if tight, cut it between two clamps.
- Clear the baby's mouth and oropharynx of mucus with a mucous sucker, if needed, before the body delivers. Deliver the shoulders by depressing the head posteriorly so that lateral flexion of the body occurs. The rest of the baby automatically follows.
- Cut the cord between clamps.
- Note birth time.
- Do essential and basic new born care.
- Give the baby to mother and let the baby start suckling if the baby is well (breathing/crying) and start resuscitation if unwell.
- Palpate the abdomen to rule out presence of additional baby.

## 6. Active Management of third stage of labour

- Inj. Oxytocin 10 units IM after delivery of foetus (within 1 min).
- Look for placental separation. Place the left hand on lower abdomen to detect the contraction of uterus. (After delivery, uterus is at or just below the level of umbilicus. It also ensures early detection of blood collecting inside the uterus.)

❖ *Signs of placental separation:*

- Uterus becomes contracted, hard and globular;
- Uterus rises just above umbilicus;
- Extra uterine lengthening of umbilical cord;
- A gush of blood frequently appears;
- On pushing the uterus up in the abdomen, the cord does not recede back.

- Deliver placenta (after its separation) by controlled
- Cord traction while raising the uterus gently upward by abdominal hand.
- Massage the uterus (after delivery of placenta) to keep it contracted.
- Inspect the placenta & membranes for completeness.
- Inspect vagina and perineum for any tears.
- Repair tears / episiotomy if any.

**Note: Oxytocics for third stage management:**

OXYTOCIN	ERGOMETRINE/ METHYL ERGOMETRINE	PROSTAGLANDIN 15-Methyl PGF <sub>2α</sub>	MISOPROSTOL
<ul style="list-style-type: none"> <li>• Cheap</li> <li>• No contra-indication</li> <li>• Safe – no side effects</li> </ul>	<ul style="list-style-type: none"> <li>• Cheapest</li> <li>• Important contra-indications</li> <li>• Side effects – sometimes</li> </ul>	<ul style="list-style-type: none"> <li>• Costly</li> <li>• Some contra-indications</li> <li>• Some side effects</li> </ul>	<ul style="list-style-type: none"> <li>• Less costly</li> <li>• No significant contra-indication</li> <li>• No significant side-effect</li> </ul>

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Curelax  
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<ul style="list-style-type: none"> <li>• Effective – quick action</li> <li>• Less heat labile</li> <li>• 10 units IM</li> </ul>	<ul style="list-style-type: none"> <li>• serious</li> <li>• Effective</li> <li>• Heat labile</li> <li>• 0.2 mg IM/IV</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Highly heat labile</li> <li>• 125-250 mcg IM</li> </ul>	<ul style="list-style-type: none"> <li>• Effective</li> <li>• Highly heat stable</li> <li>• 600 mcg orally</li> </ul>
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- Oxytocin - first choice (but never give IV bolus)
- Misoprostol - has a promise
- Prostaglandin – effective but costly
- Ergometrine/Methyl ergometrine – has contraindications & side effects
- Use other oxytocic if oxytocin is not available.

Exclude contraindications if using methyl ergometrine & remain cautious about side effects

## 7. Immediate postpartum care

- Closely monitor for first 6 hours.
  - Pulse, respiration, temperature, B.P., G.C
  - Vaginal bleeding.
  - Uterine hardness.
- @ Every 15 mins, for 2 hours.
- @ Every 30 mins, for 2 hours.
- @ Every hour for 2 hours.
- Massage the uterus every 15 mins. to maintain contraction.  
If stable (and there is no contraindication) give her something to drink when she feels thirsty and something to eat when she is hungry.
- Keep the baby in skin contact with mother.
- Initiate exclusive breast feeding within 1 hour.

## 10. Pre eclampsia/Eclampsia

- Problem:
- Pregnant woman has high BP
  - Pregnant or recently delivered woman complains of headache/ blurred vision/blindness/epigastric pain/vomiting/oliguria/anuria
  - Pregnant or recently delivered woman is unconscious or has convulsions

### Initial management:

- Mobilize help
- Rapid evaluation of vitals
- Resuscitation if needed
- O<sub>2</sub> inhalation
- If unconscious/convulsing
  - Place her on her side
  - Ensure clear airway
  - Protect from injury
  - Aspirate her mouth and throat after fit if needed.

### Diagnosis:

Hypertension: BP  $\geq$  140 / 90 mmHg, or an increase of 30 mmHg systolic or 20 mmHg diastolic

Before 20 weeks – chronic hypertension

After 20 weeks – Gestational hypertension (PIH)

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**Pre eclampsia:** Hypertension + Proteinuria.

- Mild -
  - BP < 160/110 mmHg
  - Proteinuria  $\leq$  2+
- Severe -
  - BP  $\geq$  160 / 110 mmHg
  - Proteinuria  $>$  2+
  - Headache, visual disturbance/blindness/diplopia, epigastric pain, vomiting, oliguria; (also known as ominous or danger signs of imminent/impending eclampsia – indicating that the woman may develop eclampsia any time)

**Eclampsia:** Pre eclampsia plus convulsion and / or coma.

*Diagnose and treat any convolution during pregnancy and within one week of child birth as eclampsia unless proved otherwise.*

**Note:**

1. **Oedema** – As 50% normal pregnant women may have oedema – neither its presence conforms nor does its absence excludes the diagnosis of pre eclampsia. More over hypertension and proteinuria are mainly prognostically important. But suspect pre eclampsia if there is oedema or excessive/rapid weight gain.

2. **Prevention of Pre eclampsia and Eclampsia:**

- Fluid and salt restriction does not help.
- Beneficial effect of aspirin/calcium – not yet proved
- Pre eclampsia is not preventable. But early detection and management of pre eclampsia will prevent the complication of eclampsia.

### **Management: At BEmOC**

#### **Management of Gestational Hypertension and Mild Pre eclampsia:**

- Rest, normal diet.
- Monitor BP and proteinuria.
- No salt restriction / sedative / anticonvulsant / diuretic
- Methyldopa (up to 500mg QID) / Labetolol (100 mg TID) / Nifedipine (5-10 mg TID) if diastolic BP  $>$  100mmHg - maintain it between 90-100mmHg
- Monitor foetal growth, wellbeing and maternal wellbeing
- Plan delivery at term, or earlier in case of
  - Significant IUGR
  - Worsening proteinuria / unsatisfactory BP control
    - ❖ Refer to higher centre in such cases.

#### **Management of Severe Pre eclampsia:**

- Prevent convolution with MgSO<sub>4</sub> as in eclampsia (loading dose)
- Rapidly control BP with Nifedipine 5 - 10 mg orally (or administer 3-4 drops intra nasally by puncturing the capsule) - repeat after 10 - 15 mins, if needed, to lower DBP between 90-100 mmHg/ Labetolol Inj. can also be used (vide note at end of section)
- If delivery is not imminent within a short period (few hours), refer to higher center. (Delivery should be planned within 24 hours)
- If delivery is imminent
  - Conduct delivery carefully monitoring foeto maternal well being.
  - Manage 3<sup>rd</sup> stage actively with oxytocin 10 units IM.
  - Remain vigilant in Post Partum period.
  - Maintain MgSO<sub>4</sub> for 24 hours as in eclampsia, continue antihypertensive till DBP is 90 mmHg

Shahrukh

Md. Al Haider  
22/11/13

Sonajha  
Chakraborty  
22/11/13

### **Management of Eclampsia:**

- Control convulsion: MgSO<sub>4</sub> (loading dose)
- Control BP: as in severe pre eclampsia.
- If there is convulsion/coma:
  - Place her on her side
  - Protect from injury
  - Ensure clear airway
  - Give oxygen: 4-6 L/min
  - Aspirate her mouth and throat if needed especially after fit
- I V Fluid: Ringer Lactate – about 40 drops per/min
- Catheterize the bladder
- Note output
- Check for pulmonary oedema (basal creps)
- Look for complications
- Never leave the patient alone.
- If delivery is not imminent, refer to higher centre after these primary treatment and loading dose of MgSO<sub>4</sub> & initial dose of antihypertensive (such patients should deliver within 12 hours)
- If delivery is imminent:
  - Conduct delivery – and expedite & curtail 2<sup>nd</sup> stage if needed
  - Actively manage third stage
  - Remain vigilant in post partum period.

### **MAGNESIUM SULPHATE REGIMEN**

#### **Loading dose:**

- Give magnesium sulphate (as 20% solution) 4gm IV in over 5 mins.
- Follow immediately with 10gm of 50% magnesium sulphate solution (5gm in each buttock) deep IM
- If convulsion recurs after 15 mins give 2gm MgSO<sub>4</sub> (as 20% solution) IV in over 5 mins.

#### **Maintenance dose:**

- 5 gm magnesium sulphate (50% solution) with 1 ml 2% lignocaine IM every 4 hours in alternate buttock.
- Continue treatment for 24 hours after delivery or the last convolution whichever is later.
- Watch
  - Respiratory rate
  - Patellar reflex and
  - Urinary output
- With hold maintenance dose of MgSO<sub>4</sub> if respiratory rate is below 16/mins, patellar reflexes are absent/sluggish, urinary output is less than 30 ml/hour for the preceding 4 hours.
- The drug can be restarted when the finding returns to normal.
- In case of respiratory arrest, give calcium gluconate 1 gm (10 ml of 10% solution) IV slowly and assist ventilation until respiration begins and the effects of MgSO<sub>4</sub> are antagonized.

#### **Post Partum Care**

- Continue MgSO<sub>4</sub> for 24 hours after delivery or last convolution whichever is later
- Continue antihypertensive (Nifedipine 5-10 mg orally TID/ oral Labetolol 100 mg TID adjusted according to BP) till DBP is 90 mmHg
- Maintain intake output chart and infuse IV fluid accordingly: avoid pulmonary oedema.
- Oral feeding as early as possible.
- Note pulse, respiration, temperature and BP initially half-hourly for 6 hours, then 4 hourly.
- Look for complications
- Refer to higher centre even after delivery in case of:
  - Oliguria
  - Continued coma/uncontrolled convulsion
  - Suspected DIC, HELLP syndrome
  - Any other complication

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## **Management: At CEmOC**

### **Management of Gestational Hypertension and Mild Pre eclampsia:**

- Treat as in BEmOC
- Monitor BP, proteinuria, maternal condition, foetal growth & wellbeing
- Use additional antihypertensive if required
- Spontaneous labour may ensue at term, otherwise, plan delivery at term, or earlier in case of:
  - Significant IUGR/compromised foetal wellbeing
  - Worsening proteinuria / unsatisfactory BP control
- Decide termination of pregnancy considering risk Vs benefit of further in utero stay Vs delivery
  - Vaginal delivery feasible - Induce labour (ARM, oxytocin drip) (after ripening of cervix with dinoprostone gel if necessary)
  - Vaginal delivery not feasible/induction not possible - Do caesarean section

### **Management of Severe Pre eclampsia:**

- Institute antihypertensive, anticonvulsant ( $MgSO_4$ ) and general management as in BEmOC
- Plan delivery within 24 hours
  - In labour
    - Vaginal delivery possible - monitor labour, expedite if needed & conduct delivery
    - Vaginal delivery not feasible - Do caesarean section
  - Not in labour
    - Vaginal delivery feasible - Induce labour (ARM, oxytocin drip) (after ripening of cervix with dinoprostone gel if necessary)
    - Vaginal delivery not feasible/induction not possible - Do caesarean section
- Manage labour & postpartum period as in BEmOC

### **Management of Eclampsia:**

- Antihypertensive, anticonvulsant ( $MgSO_4$ ) and general management as in BEmOC
- Terminate pregnancy without delay. Attempt delivery within 12 hours.
  - In labour
    - Vaginal delivery possible - monitor labour, expedite if needed & conduct delivery
    - Vaginal delivery not feasible - Do caesarean section
  - Not in labour
    - Vaginal delivery feasible - Induce labour (ARM, oxytocin drip) (after ripening of cervix with dinoprostone gel if necessary)
    - Vaginal delivery not feasible/induction not possible - Do caesarean section
- Manage labour & postpartum period as in BEmOC

#### **Note:**

1. Labetalol in IV titrating doses can also be used to control BP rapidly & smoothly
  - Labetalol 10mg IV
  - If no/inadequate response after 10 mins, 20 mg IV
  - Increase to 40 mg & then 80 mg if no satisfactory response after 10 mins of each dose.
2. In deciding the mode/route of delivery also keep in mind the need for urgent delivery which may vary from mild to severe pre eclampsia and eclampsia and also in individual cases.

## **11. Post Partum Haemorrhage**

Problem:  Heavy/excessive or more than normal bleeding after child birth

- ❖ Any amount of vaginal bleeding detrimental to maternal condition (e.g. hypotension, tachycardia) after child birth
- ❖ Vaginal bleeding of 500ml/more after child birth
  - Within 24 hours of child birth (Immediate/Primary PPH)
  - Beyond 24 hours of child birth (delayed / secondary PPH)

*Shaywala* *Mat. Handlin* *Somajita*  
22/11/13 *Chaitraa* *22/11/13*

**Note:**

- Estimates of blood loss may be notoriously less/misleading
- Bleeding may continue slowly, thus less alarming
- Impact of bleeding depend on woman's Hb level

**Immediate PPH**

**Initial management**

- Mobilize help and manage aggressively.
- Rapid evaluation of vital signs; keep shock in mind and treat urgently if present or develops
  - Massage the uterus
  - Start IV infusion with RL with 20 units of Oxytocin
- Give oxytocin 10 units IM/Catheterize the bladder
- Check
  - Whether placenta expelled or not
  - Completeness of placenta and membranes if expelled
  - Uterus contracted or flabby
  - If there is genital (cervix, vagina, perineum) tears.
- According to findings identify and manage cause of PPH as follows-

**Features:**

Placenta not expelled

**Diagnosis:** Retained placenta

**Management: At BEmOC**

- Resuscitate
- Give inj. Oxytocin 10 units IM if not already done
- Try controlled cord traction.
- If it fails attempt manual removal under sedation if bleeding is profuse/placenta separated and partially expelled into vagina.
- After MRP give another dose of oxytocic (inj. Oxytocic 10 units IM / Methylergometrine 0.2 mg IM / 15-Methyl PGF<sub>2α</sub> 0.25 mg IM) and continue supportive treatment including oxytocin drip for at least 6 hours / as needed.
- Do bedside clotting test if bleeding continues
- Give antibiotic
- Refer to higher center if
  - Placenta is not separated/entirely in uterus and there is no/minimal bleeding
  - MRP not possible
  - Bedside clotting test abnormal
  - Blood transfusion needed.

**At CEmOC**

- Resuscitation and supportive treatment
- Inj. Oxytocin 10 units IM and Oxytocin drip if not already given
- Manual removal of placenta (MRP) under anaesthesia if controlled cord traction fails
- Oxytocic (as above)
- Continue Oxytocin drip (as above)
- Blood transfusion if needed
- Correct coagulopathy if present with fresh frozen plasma and platelet concentrate (at higher centre)
- If bleeding continues look for other causes (atony, trauma) and treat accordingly

Dr. S. A. S. 22/11/13

Md. Shaukat 22/11/13

Somnath  
Chakraborty  
22/11/13

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### **Features:**

- Placenta expelled and complete.
- Uterus soft and flabby.
- No genital tear.

**Diagnosis:** Atonic Uterus.

### **Management: At BEmOC**

- Resuscitation
- Uterine massage
- Oxytocin 10 units IM if not already given
- IV fluid with RL with 20 units of Oxytocin 60 drops / min. initially, maintain with 40 drops / min. after bleeding stops (not >100 units in 24 hours).
- If bleeding continues use other oxytocics sequentially or in combination along with Oxytocin drip.
  - Ergometrine / Methylergometrine 0.2 mg IM/IV. Repeat after 15 mins. and then 4 hourly up to 5 doses if needed. (Use judiciously keeping in mind contraindications and side effects)
  - 15 methyl prostaglandin F2 $\alpha$  0.25 mg IM. Repeat every 15 mins up to 8 doses if needed.
  - Misoprostol 800 – 1000 mcg per rectum
  - Apply bimanual compression of uterus, aortic compression if needed.
- Refer to higher center with continuation of all management and with donors
  - If bleeding is not controlled
  - Blood transfusion needed

### **At CEmOC**

- If above management (including bimanual compression & aortic compression) fails to control bleeding surgical treatment will be required along with supportive management
- Perform uterine and utero-ovarian artery ligation as the first choice
- Consider internal iliac ligation / brace suture if needed
- Do subtotal hysterectomy if life threatening bleeding continues after conservative operation
- Blood transfusion as required

### **Features:**

- Uterus contracted and hard
- Placenta expelled and complete.
- Tears of cervix/vagina/perineum.

**Diagnosis:** Genital tears

### **Management: At BEmOC**

- Resuscitation
- Repair of tears under sedation & local infiltration if indicated
- If repair could not be done, pack the vagina before referring to higher centre with donors & continued supportive treatment

### **At CEmOC**

- Resuscitation
- Repair of tear if needed under anaesthesia
- Blood transfusion if needed

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### **Features:**

- Uterus contracted/soft
- Portion of maternal surface of placenta missing or torn membrane
- No genital tears

**Diagnosis:** Retained placental bits

**Management: At BEmOC**

- Resuscitation
- Explore the uterus and remove placental bits under sedation
- Keep uterus contracted with massage and oxytocics
- Refer to higher centre if removal of placental bits is not possible or fails to control bleeding

**At CEmOC**

- Exploration of uterus under anaesthesia
- Oxytocics
- Blood transfusion as needed.

### **Features:**

- Shock out of proportion to bleeding
- Pain
- Uterine fundus not palpable P/A
- Inverted uterus seen at vulva/felt in vagina

**Diagnosis:** Inversion of uterus

**Management: At BEmOC**

- Resuscitation and treatment of shock
- Attempt repositioning uterus (in recent case) under sedation (Pethidine 1mg/kg IM) if easily reposable. If placenta is attached, remove it manually after inversion is corrected
- Give oxytocics only after inversion is corrected
- Give antibiotic.
- Refer to higher centre if not easily reposable.

**At CEmOC**

- Resuscitation and treatment of shock
- Reposition of inverted uterus by hydrostatic correction or manual correction under general anaesthesia.
- Abdomino-vaginal correction (by opening the abdomen) under anaesthesia if above methods fail. Rarely hysterectomy may be required.
- Give oxytocic after correction & give antibiotics (ampicillin plus metronidazole)

**Prevent PPH: Correct anaemia antenatally**

Do active management of 3<sup>rd</sup> stage for all parturient

Remain vigilant in immediate postpartum period

#### **❖ Note: Cervical injuries**

- Bucket handle tear of the cervix occurs where cervical stitch (MacDonald or Shirodkar) is not removed and labour has progressed. It bleeds severely. Cervical edge gets torn like a handle of a bucket. They have to be referred to ERU.
- **Lateral cervical tear (Unilateral or bilateral)**

- To identify cervical tears, put Sim's speculum to posterior vaginal wall & apply a sponge holding forceps on the visible edge of cervix.

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- Now trace the edge of the cervix with another two sponge holding forceps alternately shifting the sponge holding forceps as you go around the cervix till whole circumference of the cervix is traced. Break in continuity indicates cervical injury.
- Once torn cervix is identified, catch other edge of torn cervix as shown in figure and slight traction will show the apex.
- Repair with chromic 'o' atraumatic catgut starting from above the apex (continuous or interrupted stitches)

### ***Delayed PPH***

#### **Features:**

- Variable bleeding beyond 24 hours of delivery
- Uterus – may be softer and larger than expected
- Foul discharge may be present
- Anaemia, evidence of infection

#### **Management: At BEmOC**

- Resuscitation and treatment of shock if needed
- Treat infection (Ampicillin 1g IV 6 hourly, Gentamicin 200 mg IV OD, Metronidazole IV 100 ml 8 hourly) for 5-7 days
- Oxytocin 10 units IM and 20 units in IV fluid (if unresponsive, use methergine/prostaglandin / misoprostol as for immediate PPH)
- Explore uterus and remove placental bits if any
- Refer if bleeding continues / severe infection / retained placental bits could not be excluded or removed / needs blood transfusion

#### **At CEmOC:**

- general measures, oxytocics, antibiotics as in BEmOC
- Explore and evacuate uterus if needed
- Blood / packed cell transfusion if needed
- Continue supportive treatment and treat associated complication if any
- If bleeding continues exclude coagulopathy (bedside clotting test / coagulation profile)
- Consider uterine and utero-ovarian artery ligation or hysterectomy if serious bleeding continues (rarely)

## **12. Identification and management of foetal distress**

#### **Evidences of foetal distress in labour**

- Persistent tachycardia of above 160/min.
- Persistent bradycardia of below 120/min.
- Irregularity of foetal heart sound.
- Passages of meconium per vaginum in cephalic presentation.

#### **Management: At BEmOC**

- O<sub>2</sub> inhalation
- Left lateral position
- Injection Ringer lactate
- Stop Oxytocin if being used
- Expedite delivery (forceps/vacuum extraction) if in second stage. Refer to higher centre if that is not possible or if in first stage.

#### **At CEmOC**

- O<sub>2</sub> inhalation, left lateral position, IV fluid , stop oxytocin
- Expedite vaginal delivery in second stage

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- Do caesarean section in the first stage & if expediting vaginal delivery is not feasible.

### **13. Fever after child birth (Puerperal pyrexia)**

Fever (temperature  $\geq 38^{\circ}\text{C}$  or 100.4 F) more than 24 hours after delivery.

#### **General Care:**

- Rapid evaluation. Treat shock if present
- Bed rest
- Control temperature (tepid sponging/paracetamol)
- Adequate hydration by mouth / IV
- Examine to identify cause and treat as follows

#### **Features:**

- Fever, chills
- Lower abdominal pain
- Foul smelling vaginal discharge
- Tender uterus/lower abdomen
- Hot vagina
- Anaemia and features of septic shock, septicaemia, peritonitis, pelvic abscess may be present

**Diagnosis:** Puerperal sepsis (metritis)

#### **Management: At BEmOC**

- Therapeutic antibiotics in combination –  
Ampicillin 1.2 gm IV 6 hourly  
Gentamicin 5 mg/kg IV OD  
Metronidazole 500 mg (100 ml) IV 8 hourly
- IV fluids : RL
- Exclude other focus of infection
- Remove retained placental bits if any
- Exclude pelvic abscess or peritonitis: if present refer to higher centre
- Continue antibiotics for 7 days or at least 48 hours after the patient is afebrile whichever is later
- If no improvement/deterioration of condition, refer to higher centre

#### **At CEmOC**

- Antibiotics, general management as in BEmOC
- Routine investigations e.g. complete blood count, renal & liver function tests, microbiological tests & abdominal USG. Tailor treatment accordingly.
- If conservative measures fail / signs of generalized peritonitis, do laparotomy for draining the pus / peritoneal lavage.
- If uterus is necrotic/septic do subtotal hysterectomy
- If pelvic abscess, drain pus by culdotomy.
- Continue antibiotics & supportive management.

**Note:** Pelvic abscess - Lower abdominal pain and distension, persistent spiking fever, tender swelling in fornix/POD, poor response to antibiotic.

Peritonitis - Fever, severely ill, abdominal pain and distension, absent bowel sound, rebound tenderness, vomiting, shock, oliguria.

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### **Features:**

- Fever
- Normal lochia
- Non-tender uterus/ abdomen
- Other focus of infection

**Diagnosis:** Puerperal fever due to other cause.

### **Management:**

- Identify the cause and treat accordingly
- Consider – breast engorgement/mastitis/ breast abscess  
Wound infection  
Deep vein thrombosis  
UTI, respiratory infection, malaria, etc.

**Note: To prevent puerperal sepsis:**

- **Ante-partum period:**
  - Improve health and nutrition and treat anaemia.
  - Personal hygiene.
  - Treat any focus of infection.
- **Intra-partum period:**
  - Maintain five cleans.
  - Avoid unnecessary vaginal examination and routine bladder catheterization.
  - Strict aseptic precaution.
  - Prophylactic antibiotic in high-risk cases, e.g., prolonged rupture of membranes, suspicion of chorioamnionitis.
- **Post-partum period :**
  - Personal hygiene.
  - Proper care of wounds
  - Treat septic foci if any
  - Correct anaemia

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