NORMAL LABOUR AND DELIVERY 1

Sign and Symptoms of Labour

Regular painful uterine contraction | Membrane Rupture or Not | Show

If Cervix is 5 cm dilated the mother is in active labour

Yes

- Start Labor Care guide
- Monitor cervical dilatation
- Monitor numbers & duration of contraction at least 3 or more contraction in 10 minutes, each lasting for more than 40 second
- Watch for warning sign in labour
- Empty bladder • Monitor FHS • Soft liquid diet

No

- Monitor the progress of labor
- Fetal monitoring and maternal monitoring
- Reassure and discuss
- Plan for delivery

- Normal Progress by Labor Care guide

Get ready for delivery:**

- Ensure delivery set
- Arrange 3 or more clean and dry baby wrappers
- Clean Newborn resuscitation equipment (Newborn Suction, Bag and Mask)
- Draw Inj. Oxytocin 10 units
- Episiotomy set, only if it indicated

Immediate Postpartum care

- Exclude second baby
- Give Oxytocin 10 units IM within 1 minute
- Delay cord cutting 1-3 minutes
- Perform active management of 3rd stage
- Keep baby to mother skin to skin contact
- Uterus massage & check for uterus contraction
- Normal diet to mother

Mother Care

Gently massage uterus, Check uterus contraction but not in every 15 minutes

- Abnormal Progress by Labor Care guide
- Labour is not progress after 8 hours of good uterine contraction

Refer to CEONC site. Use Referral slip. Ensure Follow up

If Placenta not delivered within 30 minutes of delivery of baby, see retained placenta protocol for management

Baby Care

Providing Immediate and Essential Newborn care:
Dry and stimulate the baby
Assess breathing

If normal breathing,

- skin-to-skin contact and delayed cord clamping (within 1-3 minutes)
- Early initiation of breastfeeding within an hour
- Thermal care
- Give inj Vit K1

If not breathing,
stimulate the baby. If no breathing or crying, immediate cord clamping and follow the steps of resuscitation.

Essential newborn care includes:
Support breastfeeding, Infection prevention, Head to toe examination of newborn, Recognition and response to danger signs, Timely and safe referral when needed

*First line Management to be added
** Ensure readiness as per MSS standards
Note: if the woman with signs of obstruction, transverse lie, cord/ hand / foot prolapse, immediately refer with rst line management.

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NEW BORN RESUSCITATION 2

Review medical records and talk to the mother to identify risk factors that affect newborn care.

Be prepared:
Place: Clean, Warm and well- lighted resuscitation area
Person: Identify support
Equipment: Baby wrapper, suction apparatus, Bag and Mask

Dry after birth

↓

Assess Breathing or crying

Yes → Delayed cord clamping (within 1-3 minutes and routine newborn care

↓ No

Dry and maintain normal temperature, position airway, Stimulate by rubbing the back firmly 2-3 times, clear secretion if needed

→ Re-Evaluate respiration

Not breathing or gasping

↓

Start B&M ventilation Rate: 40 BPM, look for chest movement with each ventilation. SPO2 if available

↓

After 1 minute of ventilation, assess breathing and heart rate

If HR> 100 and not breathing → Continue B&M ventilation/Post ressuscitation care

If HR< 100 and not breathing ↓

- Apply ventilation corrective steps and continue ventilation
- Reapply mask
- Reposition head
- Clear mouth and nose of secretion
- Open mouth slightly
- Squeeze the bag harder
- Reassess chest rise

↓

Reassess breathing and heart rate every 3-5 minutes

↓

If HR continues to remain low (HR<60) after 20 minutes of B&M ventilation, discuss with parents consider stopping ventilation Provide emotional support to the mother and the family

Labored breathing or grunting

↓

Give supplemental oxygen, monitor SPO2 if possible

60 seconds

Targeted pre-ductal saturations after birth
(right arm)

1 min	60-65%
2 min	65-70%
3 min	70-75%
4 min	75-80%
5 min	80-85%
10 min	85-95%

If new born starts breathing spontaneously, close monitoring and follow steps of Essential newborn care

If new born is not breathing or gasping, continue ventilation with oxygen until newborn starts spontaneous breathing or consider referral to a higher center for advance care

If there is no breathing and no heart rate initially and no heart rate and breathing after 10 minutes of effective ventilation, stop ventilation. Baby is stillborn

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POST PARTUM 3

Blood loss (Rapid Assessment)

Qualitative Assessment:
BP, pulse, respiration, pallor, signs of shock and amount of blood loss

Quantitative Assessment:
Any amount of blood loss which deteriorate maternal condition (with Symptoms of preshock)
If blood loss 500ml or more after child birth

Call for help
(use bundle approach at once)

- Resuscitation
  - Supine position - Airways secure - Oxygen (6-8 lts)
- Circulation
  Insert two 16/18 gauze canula
- Keep woman warm
  Fluid inj RL/NS upto 3.5 lit
- Hemoglobin/PCV, Blood grouping and cross matching, Bedside clotting test
- If Hb<7 gm% or signs of shock maintain volume and arrange referral for blood transfusion
- Catheterize bladder
- Maintain input and output
- Reassure and keep patient and family informed

Medical management

- Inj. Oxytocin10 IU IM,10 unit in 500 ml RL
- Misoprostol – 4 tab
- Continue IV oxytocin
- TXA* – 1gm IV stat then 1gm IV TDS- 24 hrs.

Action to be taken

- Uterine massage
- CCT
- Condom tamponade

Monitoring

Monitor BP, Pulse, respiration, urine output, mental status every 15 minute till patient is Stabilized

Stabilize the patient and Immediate referral to CEONC or above

* TXA- Tranexamic Acid

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SHOCK MANAGEMENT 4

Signs and symptoms

- Rapid and weak pulse (110 beats per min or more)
- Systolic BP<90 mm of Hg
- Cold and clammy
- Confused, anxious or unconscious
- Rapid in breathing (30 breaths per min or more)
- Urine output less than 30ml per/hr
- Pallor of general skin and mucous membrane
- Sweating

Immediate steps

Shout for help

- Elevate foot end of bed and keep warm, keep left lateral position if patient is unconscious.
- Clear air way
- Give Oxygen (6-8 lit/min) by mask/nasal cannula if available.
- Start IV NS or RL in both arms with large cannula (16/18), rapidly 1liter in 15-20 minutes at least 2 liter in1 hr.
- Catheterize and maintain urine output (30 ml/hr)
- Lab test (Hb, blood cross matching and bedside clotting test if available)
- Monitor vital signs (BP, pulse,respiration, temperature) and blood loss every 15 minutes till patient is stable (pulse = 90 bits/min, systolic BP >100 mm of Hg) then 1/2 hrly, 2 hrly, 4 hrly as necessary.
- If condition improves adjust IV fluid 1liter in 6 hours
- If breathing difficulty or puffiness develops, hold IV drip
- Reassure and keep patient and family informed

Identify the cause of shock if possible or refer immediately

- Haemorrhage
  - Medical/Surgical management of Haemorrhage
- Sepsis
  - Septic shock
    - Management of Septic shock
- Neurogenic shock
  - Management of Neurogenic shock
- Abortion
  - Septic shock
    - Management of Septic shock
  - Haemorrhagic shock
    - Management of Haemorrhagic shock

Other possible causes

- Ectopic pregnancy
- Molar pregnancy
- Trauma and assault

Immediate Referral to higher referral center

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IDENTIFY SEVERE PRE-ECLAMPSIA & ECLAMPSIA 5

Signs and symptoms

- Severe headache
- Difficulty in breathing
- Blurred vision
- Epigastric pain or pain in hypochondrium
- Nausea and vomiting
- Diastolic blood pressure110 mm of Hg or more
- Albumin in Urine 3+ or more
- Hyper reflexia
- Convulsion/fit

INVESTIGATIONS

- Urine for albumin
- Blood
  - Haemoglobin
  - Grouping & Rh
  - Bed side clotting test
  - LFT, uric acid, RFT

Convulsion

No

Severe pre-eclampsia

– To keep vein open

- Start IV line with RL or NS
- Catheterize and monitor urine output
- Prevent seizure: Give MgSO4 as per regime (Loading dose)

Control BP:

- If diastolic BP ≥110 mm of Hg, give Nifedipine 10 mg orally. If Nifedipine is not available Labetalol 100 gm orally will be the next drug of choice
- Check BP after 15 minutes
- If Diastolic BP is still ≥110 mm of Hg repeat Nifedepine 10 mg orally/ If Nifedipine is not available Labetalol 200 gm orally will be the next drug of choice

Prepare for referral and refer patient for CEONC/Higher center for delivery of baby (immediately) and further management

Yes

Eclampsia

- Shout for help
- Put in left lateral position
- Put air-way and suction
- Give oxygen 4-6 liters/ min
- Prevent injury during convulsion
- Start IV line of NS or RL - to keep vein open
- Catheterize and monitor urine output

Control seizures:

- Give MgSO4 as per regimen

- If diastolic BP ≥110 mm of Hg, give Nifedipine 10 mg orally. If Nifedipine is not available, Labetalol 100 gm orally will be the next drug of choice
- Check BP after 15 minutes
- If Diastolic BP is still ≥110 mm of Hg repeat Nifedepine 10mg orally OR Labetalol 200 mg orally (Max. dose for labetalol - 1200 gm in 24 hrs)

Refer to higher referral center and ensure delivery of baby within 12 hrs

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MANAGING SEVERE PRE-ECLAMPSIA & ECLAMPSIA WITH MAGNESIUM SULPHATE (MgS04) 6

LOADING DOSE

Take 4 gm MgS04 IV as 20 % solution:

- Take one 20 ml Syringe .
- Draw 4 ampules of MgSO4 50 % = 8 mL=4 gm into the syringe.
- Add 12 mL water for injection to make it 20°/o.
- Give IV slowly over 20 minutes

Follow promptly with 10 gm as 50 % MgS04 deep IM

- Take two 10 mL Syringes
- Draw 5 ampules of MgSO4 50 % = 10 mL = 5 gm in each syringe.
- Add 1 mL of 2 % Lignocaine in each syringe
- Give deep IM in each buttock slowly over 5 minutes

REPEAT DOSE

- If reoccur after 15 minutes give 2 mg of 50% MgSO4 solution IV over 10 minutes

→ Refer

If refer not possible

MAINTENANCE DOSE

5 gm as 50 % MgS04 deep IM in alternate buttocks every 4 hourly

- Take one 10 mL syringe.
- Draw 5 ampules of MgS04 50 % = 10 mL = 5 gm into the syringe.
- Add 1 mL of 2 % Lignocaine in that syringe.
- Give deep IM in alternate buttocks every 4 hourly.
- Continue same treatment for 24 hours after delivery or after the last convulsion.

Before repeating MgSO4 , Always Monitor for Toxicity: Withhold or Delay if any of the following.

- Respiratory rate <16/minute
- Patellar reflexes absent
- Urine output < 30 mL/hr

Monitor 1 hourly

- Vital Signs
- Reflexes
- Urine output
- FHS

If Respiratory Arrest:

- Assist ventilation with bag and mask .
- Give Calcium Gluconate 1 gm (10 mL of 10% Calcium Gluconate) IV slowly until respiration begins.

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ANTEPARTUM HAEMORRHAGE-BLEEDING AFTER 22 WEEKS OF PREGNANCY

7

Rapid assessment • Pulse, BP, temp, respiration and signs of hypovolemic shock p/v bleeding, foetal movement

No P/V examination

If signs of shock present

↓

Treat shock immediately

Immediate management:

- open two IV line with 16 / 18 gauze cannula(NS / RL)
- Catheterize and maintain input and output
- Bed side clotting test, Hb, Blood grouping & cross matching if possible
- Reassure and keep patient and family informed
- Ultra sound exam (where available) to see localization of placenta, gestational age & fetal viability

Abdominal Examination

Soft, no uterine contraction, no pain or no tenderness, fetal presentation not engaged

→ Suspect Placenta Previa, Do not do PV Examination

Pain in abdomen, tender uterus and tonic contraction of uterus

→ Suspect abruptio Placenta

- Check FHS and Maternal condition
- Per speculum examination to exclude Advanced Labour, if patient is in advance labour support for vaginal spontaneous delivery
- If labour is not eminent, refer

Refer to higher referral center with functional CEONC

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UNSATISFACTORY PROGRESS OF LABOUR 8

Labor Care guide is a clinical Decision Making tool of labour

Problem:

- Cervix not dilated beyond 5 cm after 4 hours of regular contraction

Prolonged Labour

Assessment:

- Vital sign : (Pulse, BP, Temp., Resp.)
- Abdomen: Fetal Lie,
  Presentation
  FHS,
  Uterine Contraction,
- PV examination: Cervical dilatation
  Effacement
  Station of presenting part
  Membrane Moulding present
- Use Labor Care guide and Evaluate

Immediate Care:

- Clear liquid diet or IV fluid
- Encourage to pass urine, if unable to pass then catheterize bladder
- Counselling to family / Accompanying person

Refer to higher referral center with functional CEONC

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PUERPERAL FEVER AND SEPSIS 9

Puerperal Fever: Fever or temperature 38^{0}C or more, more than 24 hours and within 10 days after giving birth.
(38^{0}c=100.4^{0}F)

Puerperal Sepsis: Infection of the genital tract occurring at any time between the onset of rupture of membrane or labour, and within 42nd day of the postpartum period in which two or more of the following signs are present: Fever, Pelvic pain, abnormal vaginal discharge, foul smelling discharge and delay in reduction of the size of uterus.

Rapid Assessment: Pulse fast and weak; Systolic BP, temperature ≤ 98.6^{0}F ≥100.4^{0}F, Foul smelling discharge, Pain abdomen, looks toxic.

Immediate management

- Adequate hydration orally or IV fluid
- Catheterization
- Reassure and keep patient and family informed
- Investigations, urine routine and culture
- Investigations, RFT, CBC, Blood culture - where available

Evidence of uterine infection:

- Tenderness of lower abdomen,
- Foul smelling vaginal discharge

Yes

Start Antibiotics:

- Ampicillin 2g IV 6 hourly +
  Gentamicin 5mg/kg body weight IM/ IV +
- Metronidazole 500 mg IV 8 hourly

Sign of Septic Shock

- Rapid and Weak pulse ≥ 110/min,
- Low systolic BP less than <90 mm of Hg
- Temperature > 100.4^{0}F ≤ 98.6^{0}F
- Confusion, anxious or unconscious
- Cold & clammy and look toxic

Immediate shock management according to shock management protocol

Refer for further management

* Note: If patient cannot be refer immediately Continues the Management and plan for referral

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KANGAROO MOTHER CARE (KMC) 10

Premature /LBW newborns

<1500 gms

→ Immediate transfer to SNCU/NICU (Level II/III care)

Note: Mother, father and other family members can start KMC while the baby is in SNCU/NICU

1500-2500gms

Unstable

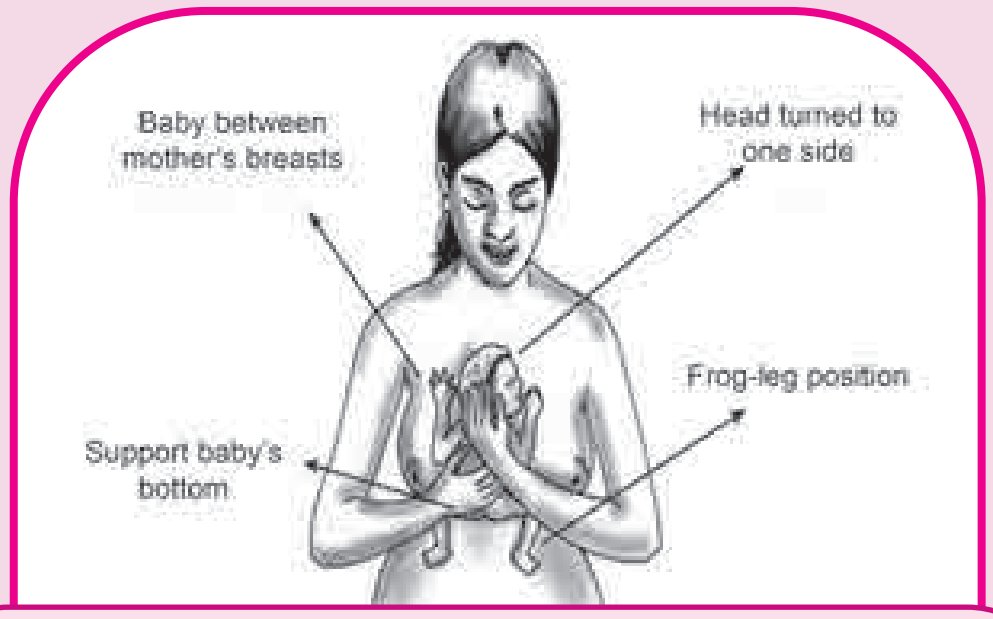
Unstable refers to unable to breath spontaneously or in respiratory distress, in shock, severe hypothermia or hyperthermia, lethargic or unconscious or having seizures.

Yes →

No

Initiate KMC (Three components to consider)

Early prolonged and continuous skin-to-skin contact between the mother, father or other family members and the baby
Exclusive breastfeeding or feeding with breast milk
Facilitating early safe discharge, *home visit* with regular follow-up



How to do KMC ?

- Keep on bare chest.
- Dress the newborn with cap, gloves and diaper
- Put the newborn between mother's breast touching newborn's bare chest in upright position
- Keep newborn's feet below mother's breast and hands above breast
- Ensure hips are flexed abrupted and arms are flexed (frog position)
- Securely wrap the baby
- Ask mother to wear loose clothing over the wrap
- Advice mother to look for breathing, colour, temperature of the baby
- Loosen clothes and feed newborn on demand (every two hours)

Benefits of KMC

1. Increase rate and duration of breastfeeding, including exclusive breastfeeding.
2. Provide effective thermal control with a reduced risk of hypothermia and infection.
3. Early discharge and gain more weight than infants handled conventionally.
4. More regular breathing and fewer predisposition to apnea.
5. Stronger bonding with the baby.
6. Improves long term health outcomes.

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