ZIMBABWE

National Postnatal Care Guidelines

CARING FOR THE MOTHERS AND NEWBORNS

Ministry of Health and Child Welfare - Reproductive Health Unit

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FOREWORD

Safe motherhood programmes recommend that all women receive a check up on their health within two days after delivery. Women who deliver at home are therefore supposed to visit a health facility for postnatal care services within 24 hours, and subsequent visits (including those women who deliver in a health facility) should be made at three days, seven days, and six weeks after delivery. It is also recommended that women who deliver in a health facility should be kept for at least 48 hours (up to 72 hours depending on the capacity of the institution) for the mothers and infants to be monitored by skilled personnel.

Forty three percent (43%) of mothers received a postnatal checkup for the most recent birth according to the Zimbabwe Demographic and Health Survey of 2010-11. Only 27 percent of women received a postnatal check-up within the first two days after delivery.

A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Therefore, prompt postnatal care (PNC) is important for both the mother and the neonate to treat complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child.

Zimbabwe has recently made policy revisions in postnatal care in line with the latest WHO recommendations. This guideline is therefore set to guide implementation of the current policy recommendations on Post Natal Care.

I therefore urge you all to diligently implement these guidelines as we endeavour to achieve MDGs 4 and 5.

Brigadier General (Dr) G. Gwinji
Secretary for Health and Child Welfare

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chapter one

INTRODUCTION TO POSTNATAL CARE

Preamble:

The guideline aims to identify the essential care which every woman and her baby should receive, as appropriate to their needs, during the first 6 weeks after birth, based upon the best evidence available. A key component of the guideline is information to empower the woman to care for her baby and herself so as to promote their longer-term physiological and emotional well-being. It is important to note that for most women and babies, the postnatal period is uncomplicated, however post natal care (PNC) is aimed at recognizing any deviation from expected recovery after birth and then about evaluating and intervening appropriately. The guideline gives advice on when additional care may be required.

Background:

Defining the postnatal period:

Normal pregnancy and birth are a continuum that starts with conception ending in a successful birth and survival of mother and infant. For practical and management purposes this continuum is divided into four zones; first, second, third trimesters and postnatal period. The Intrapartum period or labour and delivery time (which is part of the third trimester) is further divided into first, second, third and fourth stages of labour. The fourth stage of labour constitutes the first hour after delivery during which the mother is monitored in the labour ward.

The post natal, postpartum period or puerperium is the period from the end of the third stage of labor until most of the organs have returned to their pre-pregnant state. These three terms (postnatal, postpartum, puerperium) are used interchangeably but in this manual the term postnatal period will be used.

The **postnatal period** starts when the placenta is delivered and lasts for 6 weeks. The fourth stage of labour is the first hour of the postnatal period and is very crucial for the mother and infant. However organs may only return to their pre-pregnant state weeks or even months after the 6 weeks have elapsed (eg the ureters). Other organs never regain their pre-pregnant state (eg the perineum).

Postnatal care is care offered to a woman and her infant during the postnatal period.

Why is the postnatal period Important?

Timing of Postnatal Care

First hour	Day One	Day three	Day 7	Six weeks

What does postnatal care involve?

Postnatal care (PNC) is likely to include routine and specific clinical examination and observation ofthe woman and her baby, routine and specific infant screening to detect potential disorders, support for infant feeding and ongoing provision of information especially in the era of HIV and AIDS. Traditionally PNC was usually concluded by the 6 week visit. Whereas this still applies to uncomplicated births, for HIV positive mothers and mothers with particular conditions like cardiac disease, this might need to be extended on an individualized basis.

PNC should be family centered, which means the woman's partner, and where relevant and possible, other family members should be involved. They should be provided with information they need to enhance the health and wellbeing of the mother and her child. This task becomes easier if during the antenatal, and intrapartum periods the partner and/or family where involved.

In summary PNC involves:

1. Education and empowerment of mother and her immediate family;
2. Assist mother and family to establish infant feeding;
3. Do investigations such as HIV, RPR if these were not done especially for unbooked mothers who come in advanced labour or those who deliver at home;
4. Dealing with specific postnatal conditions like PPH and HIV related conditions to ensure optimum health of the mother;

5. Early identification and treatment of infant postnatal conditions like neonatal jaundice;
6. Assist mother commence contraceptive method of her choice and
7. Offering cervical cancer screening at 6 weeks

Aims of the Guidelines:

The guideline has been developed with the following aims:

- to advise on appropriate objectives, purpose, content and timing of postnatal contacts and care for the woman and her baby;
- to advise on best practices and competencies for assessment of postnatal health and management of postnatal problems in the woman and/or her infant;
- to advise on information, education and support required during the postnatal period and
- to advise on planning of postnatal care.

The guideline ethos is that:

- postnatal care provision is undertaken in partnership with the woman and/or her family. Therefore, care is always offered to the woman and/or her family not imposed.
- care is individualised through a process of education and discussion to meet the needs of each mother-infant
- women's views, beliefs and particular circumstances are respected.
- interventions offered have known benefits.

For whom is the guideline intended?

- women who have recently given birth, their partners, families and other carers
- health care workers who come into direct contact with women and their babies. These are usually nurses (midwives, registered general nurses primary care nurses, state certified nurses), clinical officers, doctors (paediatricians, obstetricians, general practitioners), physiotherapists and psychologists.
- Health care planners and managers

Related Documents:

This guideline needs to be read in conjunction with the following Ministry of Health and Child Welfare Documents, among others:

- PMTCT of HIV
- Emergency Obstetric and Neonatal Care Manual
- Focused Antenatal Care

The Patient, Partner, Family, Community as Monitors:

This is a concept where the patient, her partner, family and community are made aware of the many ways in which they can monitor her own, as well as her fetus' or infant's wellbeing, during pregnancy, in labour and in the postnatal period. This has two major advantages:

- The patient becomes much more involved in her own perinatal care
- Possible complications will be reported by the patient at the earliest opportunity.

How the patient, partner and family can act as monitors in the postnatal period:

The mother, partner and relatives can be encouraged to report the following complications as soon as they occur or are identified:

Maternal Complications:

- Symptoms of puerperal pyrexia
- Breakdown of an episiotomy
- Breastfeeding problems
- Excessive or offensive lochia
- Recurrence of vaginal bleeding i.e. secondary post-partum haemorrhage
- Prolonged postnatal depression

Complications in the infant:

- Poor feeding or other feeding problems
- Lethargy
- Jaundice
- Conjunctivitis
- Infection of the umbilical stump

chapter two

MANAGEMENT OF MOTHER IN THE POSTNATAL PERIOD

Management of the first hour of the postnatal period (fourth stage of labour)

The correct management of the fourth stage of labour is most important as the risk of postpartum haemorrhage is greatest this time. The mother is also most anxious.

Immediately after the delivery of the placenta you should:

1. Rub up a contraction, ensure oxytocin 10iu imi or ergometrine 0.5mg imi has been given.
2. Assess whether the vaginal bleeding appears more than normal
3. Record the patient's pulse, blood pressure and temperature
4. Keep the client in the labour ward (where possible) for the first hour to be monitored by those who delivered her. During this hour the following observations are done every 15 minutes:
    a. Uterine contractility by feeling the uterus per abdomen
    b. Vaginal bleeding
    c. Pulse, blood pressure, temperature
5. Attend to other needs of the mother
    a. Wash, clean any blood, faecal matter or urine on the mother
    b. Give her something to drink or eat
    c. Allow her to bond with her infant
    d. Give her paracetamol for after birth pains
    e. Allow her to rest

After the first hour of delivery, the mother and infant can be transferred to the postnatal ward where observations are continued hourly for the first four hours and then after 4 hourly until 24 hours after delivery. **During this period the mother can help prevent postpartum haemorrhage:**

1. She should be given information about the physiological process of recovery after birth, and that some health problems are common, with advice to report any health concerns to healthcare professional, in particular PPH:
2. To recognize and prevent PPH she should be shown how to observe:

a. The height of the uterine fundus in relation to the umbilicus

b. The feel of well contracted uterus

c. The amount of vaginal bleeding

3. She should be shown how to rub up a contraction
4. She should be told to call the health worker if the uterine fundus rises, the uterus relaxes or if vaginal bleeding increases or she feels thirsty, dizzy, faint, palpitations or she just feels uncomfortable.
5. She should be educated on signs and symptoms of thromboembolism: unilateral calf pain; redness or swelling of calves; shortness of breath or chest pain. Mother should be encouraged to mobilise.
6. Signs and symptoms of infection should be explained: feeling hot and cold (fever); shaking; abdominal pain and or offensive discharge
7. For mothers who had PIH or preeclampsia signs of imminent eclampsia need to be explained: headaches accompanied by one or more of the symptoms of visual disturbances, nausea, vomiting, epigastric pain, feeling faint.

Management of the first 24 hours after delivery

After the first hour the mother and her infant are transferred to the postnatal ward or equivalent. The ideal situation would be to keep all mothers for at least 24 hours after the fourth stage of labour. During these 24 hours complications like PPH, postpartum eclampsia, difficulties in voiding can occur during the 24 hours the mother:

1. Has 4 hourly observations: pad checks; pulse; temperature, blood pressure
2. She should be specifically asked for headaches, dizziness, leg pain, voiding difficulties
3. She should be assisted to continue any relevant medication; Antiretrovirals, iron supplements; antihypertensives; antifailure treatment
4. She should continuously be assisted to establish successful infant feeding.
5. Should be educated on the changes that are going to happen to her body during the postnatal period.
6. Anti-D should be provided to non-sensitised mothers within 72 hours of delivery.

When should a mother and her infant be allowed to go home after a normal pregnancy and delivery:

A mother who has had a normal pregnancy and delivery can be allowed to go home 24 hours after delivery, provided:

1. The observations done on the woman and her infant have been normal since delivery
2. The mother and infant are normal on examination, and the infant is feeding well.
3. The mother can visit her nearest clinic or health worker on day 3, 5 (all mothers) and 7 (for primigravidas) for postnatal care.

When should a mother and her infant be allowed to go home aftera complicated pregnancy and /or delivery.

This will depend on the nature of the complication and method of delivery. For example:

1. A mother with preeclampsia should be kept until her blood pressure is normal or well controlled with oral drugs
2. A mother who has had a caesarean section will usually stay in hospital for 3 to 5 days
3. A mother who has had postpartum haemorrhage must be kept in hospital until there is no further bleeding and her

haemodynamic status is stable.(Usually 24 hours after the episode)

There are certain unique circumstances in the mother or at the health facility that might necessitate a modification of the above management:

1. Some health institutions might not have space to accommodate mothers for 24 hours after delivery

Clinically stable mothers and their infants may be discharged 6 hours after the fourth stage of labour provided the mother has been fully educated and understands the conditions of the postnatal period in both herself and her infant. The mother should also be able to be seen again by a health worker on days 1,3, 5 and 42 post-delivery.

2. Some health institutions manage mothers who live in remote areas where follow up is not possible.

These mothers and their infants will have to be kept in hospital longer (till day 5).

3. Some mothers would have had no antenatal care (unbooked) therefore difficult to follow up or unlikely to come back.

These mothers and their infants need to be kept at the health institutions till day 5 or until the results of their investigations (RPR, HIV, Hb, Rhesus grouping, CD4 count) are out and have been acted upon.

What should the health worker do when the mother comes back for review on days 1, 3 and 7.

The following must be done on the mother:

1. Take a history to check particularly for:
   a. heavy bleeding,
   b. foul smelling discharge,
   c. abdominal pains,
   d. ability to pass urine
   e. pain on passing urine,
   f. hot and cold sensation(fever),
   g. bowel symptoms,
   h. feeling dizzy
   i. Ability to breastfeed
   j. Swollen and painful breasts
   k. Swollen and painful leg
2. Assess the general condition of the mother, (general wellbeing, palor)
3. Check and record pulse rate, blood pressure and temperature
4. Examine the breasts and nipples
5. Determine the height of the uterine fundus and assess whether any uterine tenderness is present
6. Assess the amount, colour and odour of lochia
7. Check the episiotomy
8. Check whether the breastfeeding technique is correct
9. Counsel and test family for HIV and Syphilis, if these were not done (especially for home deliveries)

The following observations must be done on the infant:

1. Assess the general condition of the infant
2. Examine for jaundice
3. Examine the umbilical stump for signs of infection
4. Examine the eyes for conjunctivitis
5. Ask whether the infant has passed urine or stool since discharge and check the colour of these
6. Observe the infant feeding

Patient education on the postnatal period:

This type of education should ideally start in schools as part of any girl or boy's general education. Topics that should be emphasized during the postnatal period are:

1. Personal hygiene and care of episiotomy or Caesarean section wound

Mother should be instructed on how to do sitz baths if she has had an episiotomy or perineal tears. One tablespoon of salt in 10 to 20 litres of warm water, mother sits for at least 10 minutes in the bath. If she is not bleeding she should not put on panties or pads for at least 2 to 3 hours after sitz baths to allow drying. Every day she should have a 'no panties period'. Cotton panties should be used. Mother should avoid putting fingers or objects in the vagina. She have frequent pad changes and wash hands before and after changing pads.

With a pfannenstiel or transverse caesarean section scar dressings are usually removed on day three by which time the wound is dry. After these three days the mother can take a normal bath but should avoid scrubbing or rubbing the operation site.To avoid irritation of the scar it is preferable to use maternity panties that cover up to the navel or to have no panties at all.

2. Patterns and types of vaginal discharge post-delivery (Lochia)

There are three types of lochia; rubra, serosa and alba. Rubra is blood stained discharge, usually dark with clots but the mother should not change more than 3 fully soaked pads a day. By the seventh day there should be minimal or no bleeding. Lochia rubra is followed by a brownish discharge, not foul smelling and this can last up to a week after lochia rubra. The discharge then turns pinkish white for another week. By 33 days the majority of women have returned to their prepregnancy normal mucoid discharge. Any foul smelling or pus like discharge usually accompanied by abdominal or perineal pain is abnormal.

3. Commonly occurring postnatal symptoms

Information should be given on commonly occurring postnatal symptoms like backache, fatigue, emotional stress, perineal pain, bowel and urinary function

4. Breastfeeding technique and care of the breast

5. Family planning

The woman and her partner should be provided with adequate information on family planning methods and if they have an particular medical conditions the WHO eligibility criteria for contraceptive methods should be used. Particular attention should be paid to HIV positive or HIV discordant couples who should be encouraged to use 2 methods with the primary method being the condom.

6. Prevention of Parent to Child Transmission of HIV

See PMTCT manual

7. Resumption of coitus

Resumption of coitus depends on individuals, type of delivery, complexity of delivery, complications post-delivery and culture among other things, but generally can be resumed from 4 weeks postpartum after an uncomplicated delivery. It is particularly important to educate the man of the changes her partner's body has undergone during pregnancy and delivery and to dispel myths.

Dyspareunia

- If a woman expresses anxiety about resuming intercourse, reasons for this should be explored with her
- If a woman is experiencing dyspareunia and has sustained perineal trauma, the healthcare professional should offer to assess the woman's perineum
- A water based lubricant gel (eg K-Y jelly) to help to ease discomfort during intercourse may be advised
- If a woman continues to express anxiety about sexual health problems, this should be evaluated further

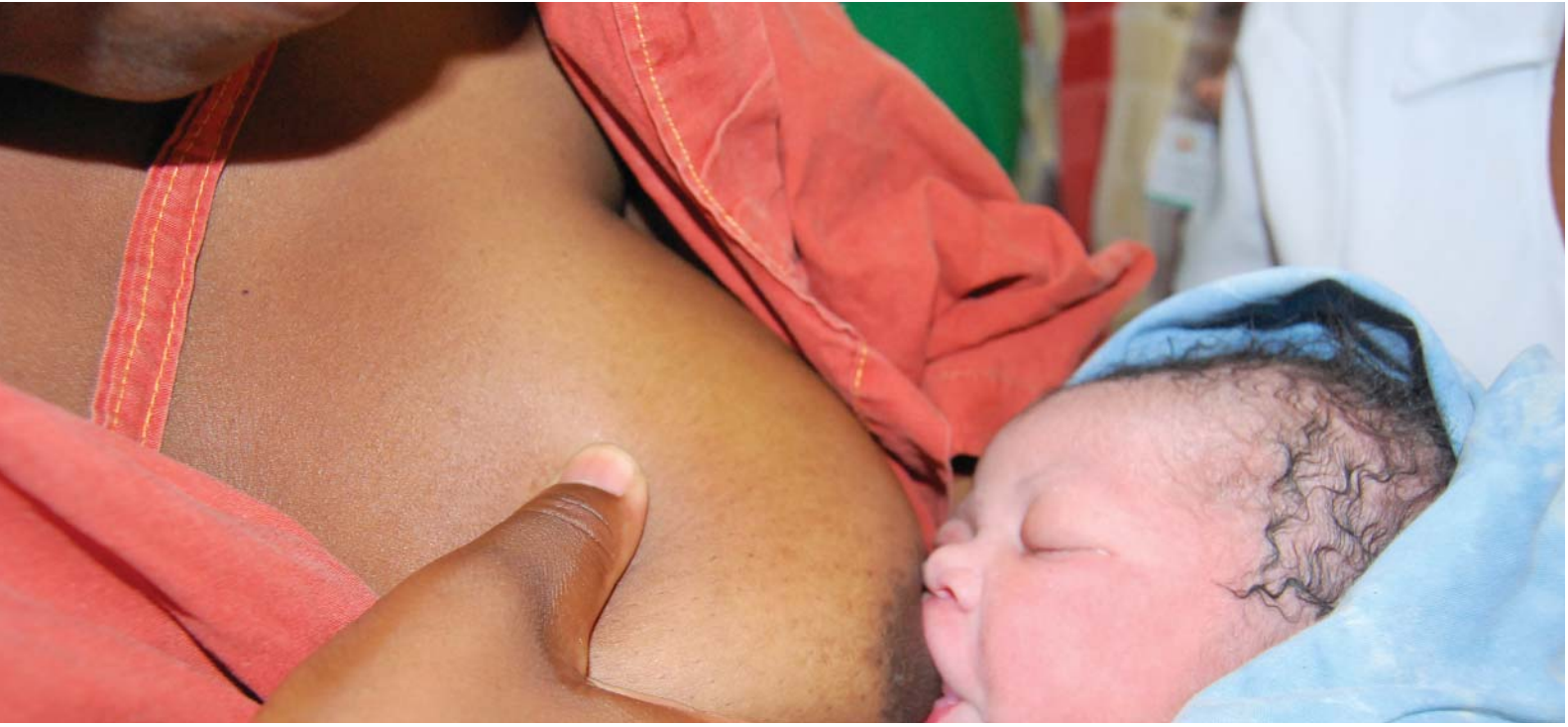
8. Any special arrangements for the next pregnancy and delivery

This is particularly important for parents who have had a bad infant outcome, have had a caesarean section, severe preeclampsia, puerperal cardiomyopathy, diabetes mellitus, severe heart disease, deep vein thrombosis, are HIV positive, mother is Rhesus negative or any other condition that requires modification of future reproductive plans. These mothers and their partners might need to be referred to specialists.

9. Prevention of Cervical Cancer, and breast examination.

The six week postnatal visit:

By this time most women have gone back to their pre-pregnancy state functionally and anatomically.



What are the objectives of the six week visit?

1. To determine whether the mother is healthy and has returned to her normal activities.
2. To ensure the infant is well and growing normally
3. To determine if infant feeding has been satisfactorily established
4. To arrange and commence contraception for the couple
5. For DNA PCR testing for infants of HIV positive mothers
6. To provide cervical cancer screening either by pap smear or VIAC
7. To address any questions or concerns the couple or woman has.

How to conduct the six week visit

History taking

Ask how the mother and infant have been since discharge from health centre. Ask direct questions about the urinary, genital, gastrointestinal systems to determine whether they have gone back to normal in case the mother does not volunteer such information. Ask about domestic violence.

Urinary system

- Any pain on passing urine
- Any loss of ability to control flow of urine at the end of urination
- Any involuntary leakage of urine
- Any urinary retention

Gastrointestinal system

- Any flatus, loose stool, or hard stool incontinence
- Any constipation
- Any haemorrhoids

Genital system

- Any pain when having sex (if this has resumed)
- Any bleeding

Examination

- General examination: Blood pressure, pulse, conjunctivalpalor,
- Examination of breasts for nipple cracks, tenderness, lumps
- Abdominal examination for uterine size, tenderness
- Genital examination if indicated
- Cervical cancer screening

chapter three

MANAGEMENT OF INFANT IN THE POSTNATAL PERIOD

First hour

Keeping the baby warm to prevent hypothermia

Immediately after the cord has been clamped, the baby is dried with a clean cloth which is discarded and baby is then wrapped in a clean dry towel then in wrapper or equivalent. Where practically possible, the baby is handed over to the mother for commencement of breastfeeding and maintenance of warmth.If for some reason it is not possible to immediately handover the baby to the mother, keep the baby warm under a baby resuscitaire with the thermometer set at 37 degrees celcius or where there is no warmer wrap the baby adequately with another wrapper/baby blanket.

Assisting bonding with mother

24 hour rooming-in and continuing skin-to-skin contact when possible

Assisting infant feeding

Breastfeeding support should be made available regardless of the location of care. All healthcare providers (hospitals and community) should have a writtenbreastfeeding policy that is communicated to all staff and parents. Each

provider should identify a lead health care professional responsible for

implementing this policy.

Women should be offered information and reassurance on:

1. colostrum – which will meet the needs of the baby in the first few days after birth
2. timing of the initial breastfeed, including the protective effect of colostrum, which is culturally appropriate
3. The nurturing benefits of putting the baby to the breast in addition to the nutritional benefits of breastfeeding.
4. A woman should be reassured that brief discomfort at the start of breast feeds in the first few days is not uncommon, but this should not persist.

5. Feeding Patterns: The woman should be told;

- that her baby may have a variable feeding pattern, at least over the first few days, as the baby takes small amounts of colostrum and then takes increasingly larger feeds as the milk supply comes in.
- that when the milk supply is established, a baby willgenerally feed every 2–3 hours, but this will varybetween babies and, if her baby is healthy, the baby'sindividual pattern should be respected.
- That if a baby does not appear satisfied after a goodfeed from the first breast, the second breast should be offered.
- that if her baby is not attaching effectively he or she may be encouraged, for example by the woman teasing the baby's lips with the nipple to get him or her to open their mouth.
- That the two breasts are adequate, they have enough milk. If she perceives milk insufficiency her breast feeding technique needs to be reviewed.
- Supplementation with fluids other than breast milk is not recommended.

6. All women and carers who are giving their babies formula feed should be offered appropriate and tailored advice to ensure this isundertaken as safely as possible, and optimises infant development, health and nutritional needs. A woman who wishes to feed her baby formula milk should be taught how to make feeds using correct, measured quantities offormula, as based on the manufacturers instructions, and how to clean/sterilise feeding bottles and teats and store formula milk.

- **Teaching mother how to clean the cord**

Cord care is crucial to prevent neonatal sepsis and tetanus. Education of the mother and immediate significant relatives like mother in law and own mother is crucial to prevent detrimental cultural practices(like putting cow dung on the cord stump). It is crucial to understand the woman's cultural and/or religious background. The mother is shown how to clean the cord with a cotton wool ball soaked in medical methylated spirit after every nappy change or at least three times a day. Hands should be washed before cleaning the cord. The whole length of the cord stump is cleaned from the navel outwards towards the cord clamps.

- **Weighing the baby**

If the room is warm the baby can be weighed immediately but if it is cold warming the baby should take precedence and the baby can always be weighed later.

- **Head to toe examination of the baby.**

The purpose of examination is to determine the anatomic normality for the first time in a new life, to determine the state of health, and to reassure the mother.

A physical examination should also be carried out. This should include checking the baby's:

- appearance including colour, breathing, behaviour, activity and posture
- head (including fontanelles), face, nose, mouth including palate, ears, neck and general symmetry of head and facial features. Measure and plot head circumference
- eyes; check opacities and red reflex
- neck and clavicles, limbs, hands, feet and digits; assessing proportions and symmetry
- heart; check position, heart rate, rhythm and sounds, murmurs and femoral pulse volume 260 of 393 Postnatal care: Routine postnatal pare of women and their babies (July 2006)
- lungs; check effort, rate and lung sounds
- abdomen; check shape and palpate to identify any organomegaly; also check condition of umbilical cord
- genitalia and anus; check for completeness and patency and undescended testes in males

- spine; inspect and palpate bony struct
  check integrity of the skin
- skin; note colour and texture as well a
  birthmarks or rashes
- central nervous system; observe tone,
  behaviour, movements and posture. E
  newborn reflexes only if concerned
- hips; check symmetry of the limbs and
  folds (perform Barlow and
  Ortolani'smanoeuvres)
- cry; note sound
- weight; measure and plot.
- Administration of Vitamin K: Vitamin K should be offered for all infants and administered with a single dose of 1 mg IM.
- Administration of tetracycline eye ointment

First 24 hours:

1. Observing breast feeding and helping mother improve the technique. The mother's breastfeeding technique needs to be continuously observed.

Signs of successful breastfeeding and milk transfer:

- Being pain free during the feed is an indicator of good position and attachment.
- less areola visible underneath the chin than above the nipple
- chin touching the breast, with the lower lip rolled down, with the nose free
- mouth is wide open
- The baby is swallowing.
- There is audible swallowing
- There is sustained rhythmic sucking and swallowing with occasional pauses
- Moist mouth
- Satisfaction after feeding
- Regular soaked/heavy nappies.

The woman:

a. feels no breast or nipple pain and feels her breast softening

b. She may experience uterine discomfort

c. She experiences no compression of the nipple at the end of the feed

d. She feels relaxed and sleepy

2. Noting if baby passed stool, urine and the colour of these

3. Parents should be offered information about physiological jaundice including:

- that it normally occurs around 3-4 days after birth
- reasons for monitoring and how to monitor. Mother needs to look at baby's skin, urine, and eyes. Physiological jaundice should just be a slight tinge of yellow on the eye, baby remains active, no temperature, feeds well.

Examination of the general condition of the baby:

Healthy babies should have normal colour, maintain a stable body temperature, and pass urine and stools at regular intervals. They initiate feeds, suck well on the breast and settle between feeds. They are not excessively irritable, tense,

sleepy or floppy. The vital signs of a healthy baby should fall within the following ranges:

- respiratory rate normally 30–60 breaths per minute
- heart rate normally between 100 and 160 beats per minute in a newborn
- temperature in a normal room environment of around 37°C

The following should particularly be checked:

- Colour of skin and eyes
- Discharge from eyes
- Observation of respirations; rapid, grunting, intercostal in-drawing
- Temperature
- Tone and motor function looking for hypotonia and paresis

After examination ensure that:

1. BCG is administered
2. The road to health cardis provided within the first 24 hours and the mother educated on its role.
3. On discharge the mother is given a birth confirmation card so she can obtain a birth certificate for her child. No child should be denied registration because of non-payment of hospital fees

Day 3 and 7:

Observation of the baby during the first week is much more important than a

once-only examination by a health worker.This is the importance of reviewing the baby at 3 and 7 days.

Observe the baby breastfeeding, examine for anaemia, jaundice, general condition. During any physical examination of a baby both parents should be present where possible to encourage the participation of both in their baby's care and to provide an opportunity for both to learn more about their baby and his/her needs.If mother is HIV positive ensure baby is taking prescribed ARVs. Confirm baby is breastfeeding at least 8 times in 24 hours

Assess for emotional attachment

Six weeks:

Assessment of growth is done. Baby is weighed

chapter four

MATERNAL POSTNATAL CONDITIONS

A. Commonly occurring non-life threatening conditions:

Headache and backache: Mild postnatal headache and backache are quite common and can be managed by simple analgesia like paracetamol or brufen. Severe headache and backache refer client.

Postpartum blues: The puerperal blues are very common in the first week after delivery, especially on day 3. The patient feels miserable and cries easily. Although the patient may be very distressed, all that is required is an explanation, re-assurance and a caring, sympathetic attitude and emotional support. The condition improves within a few days.

Constipation: Advise increased intake of fibre and fluids. If problem persists advise use of gentle stimulant laxative.

Haemorrhoids: All women with haemorrhoids should take measures to avoid constipation. If a woman has a haemorrhoid which is severe and swollen or prolapsed, or any rectal bleeding, this should be referred to a senior doctor or general surgeon.

Urinary retention: This can occur within 6 hours of delivery due mainly to pain caused by periurethral tears or other perineal tears, or urethral oedema. The mother can be encouraged to pass urine by being accompanied to the toilet, watching a tap running, taking a shower or warm bath. If this does not work a catheter is passed.

Urinary incontinence: A woman with some involuntary leakage of a small volume of urine should be taught how to do pelvic floor exercises. If large amounts of urine are leaking refer to a specialist centre as this could indicate a vesicovaginal fistula.

Loose stool or flatus incontinence: Women should be encouraged to have pelvic floor exercises. If there is hard stool incontinence or persistent loose stool refer.

Perineal and vulval pain: This is fairly common after vaginal delivery due to perineal tears, episiotomy and vulval lacerations. Simple analgesia like paracetamol is usually adequate. Perineal pain might also interfere with onset of

sexual intercourse after child birth.

Fatigue: Fatigue is common the first weeks after delivery due to lack of sleep. If persistent postnatal fatigue is impacting on the woman's care of herself or baby, underlying physical (anaemia), psychological or social causes (domestic abuse) should be evaluated

Breastfeeding concerns:

Nipple pain: The woman should be advised that if her nipples are painful or cracked, it is probably due to incorrect attachment. If nipple pain persists after repositioning and re-attachment, assessment forthrush should be considered.

Engorgement: The mother should be advised that her breasts may feel tender, firm and painful when milk 'comes in' at or around 3 days after birth. She should be advisedto wear a well-fitting bra which does not restricther breasts.

Breast engorgement should be treated with:

- frequent unlimited breast feeding including prolonged breastfeeding from the affected breast
- breast massage and if necessary, hand expression
- analgesia (paracetamol 1g)

Mastitis: The mother should be advised to report any signs and symptoms of mastitis:

- flu like symptoms,
- red, tender and painful breasts to their

Mastitis should be treated as follows:

- Continue breastfeeding and/or hand expression to ensure effective milk removal
- Analgesia (paracetamol)
- Increase fluid intake
- Broad spectrum antibiotics oral amoxycilin or intravenous antibiotics
- If a breast abscess develops surgical evacuation is done

Inverted nipples: A mother with inverted nipples should receive extra support and care to ensure successful breastfeeding.

Ankyloglossia (tongue tie): Evaluation for ankyloglossia should be made if breastfeeding concerns persist after a review of positioning and attachment by a skilled health care professional or peer counsellor. Babies who appear to have ankyloglossia should be evaluated further.

Sleepy baby: The mother should be advised that skin-to-skin contact or massaging a baby's feet should be used to wake the baby. The baby's general health should be assessed if there is no improvement.

Formula feeding:

Some women who are HIV positive may choose to formula and they need to be supported. They should be offered appropriate and tailored advice on formula feeding to ensure this is undertaken as safely as possible, in order to enhance infant development and health and fulfil nutritional needs.

A woman who wishes to feed her baby formula milk should be taught how to make feeds using correct, measured quantities of formula, as based on the manufacturers instructions, and how to cleanse and sterilise feeding bottles and teats and how to store formula milk. Parents and family members should be advised that milk, either expressed milk or formula should not be warmed in a microwave.

B. Life threatening conditions:

1. Post-Partum Haemmorrhage (pph)

Definition

PPH has been defined as vaginal bleeding in excess of 500ml after childbirth within or following the first 24 hours (World Health Organization 2003d). Because of the difficulty of estimating blood loss PPH should be based on any blood loss that affects a woman's haemodynamic balance.

Observations

The first 30 minutes to an hour should be spent in the delivery room and 15 minute observations done on fundal height, vaginal bleeding, pulse, blood pressure, general condition of patient. After this fourth stage of labor patient is monitored closely in the postnatal ward for the coming 24 hours.

Management

Resuscitation

Airway, breathing, circulation

- Secure two ivi lines with two 16 or 14G cannulas.
- Collect blood for haemoglobin and crossmatch
- Start running Normal saline or ringers lactate. Aim to give 3 times the volume of the estimated blood loss.
- Elevate the foot of bed
- Nurse in left lateral position
- Give 100% oxygen at 12L per minute per face mask

Definitive management

Quickly review the history, examine patient and deal with cause ppH(refer to Emrgencey Obstetric Care Manual)

Primary/early PPH

Haemorrhage that occurs within the first 24 hours postpartum

Secondary Postpartum Haemorrhage

What is secondary Postpartum Haemorrhage?

This is any amount of vaginal bleeding, other than the normal amount of lochia, occurring after the first 24 hours postpartum until the end of the puerperium. It commonly occurs between the fifth and fifteenth day after delivery.

Why is it important?

- A secondary postpartum haemorrhage may be so severe that is causes shock and death.
- Unless the cause of the secondary haemorrhage is treated, the vaginal bleeding will continue.

What causes secondary postpartum haemorrhage?

- Genital tract infection with or without retention of a piece of placenta or part of the membranes. This is the commonest cause.
- Separation of an infected slough in the cervical or vaginal laceration
- Breakdown (dehiscence) of a caesarian section scar.
- Gestational trophoblastic disease
- Disorder of blood coagulation
- The cause is unknown in up to half of these patients

Factors predisposing to secondary PPH

- History of incomplete delivery of the placenta and/or membranes
- Unexplained puerperal pyrexia
- Delayed involution of the uterus
- Offensive and/or persistently red lochia

Management of secondary PPH

Prevention:

- Aseptic technique throughout labour, the delivery and the puerperium.
- Careful examination after delivery to determine whether the placenta and membranes are complete.
- Proper repair of vaginal and perineal lacerations.

Treatment:

1. Admission of the patient to hospital is indicated in all except very mild cases of secondary postpartum haemorrhage. A cervical os that is open 7 days post-delivery usually indicates retained products.
2. Review of the clinical notes with regard to completeness of the placenta and membranes.
3. Obtain a cervical swab for bacteriology
4. Give Ampicillin, Gentamycin and Metronidazole intravenously
5. Give oxytocin 10iu imi stat and/or 20 units Oxytocin in an intravenous infusion
6. Blood transfusion, if the haemoglobin concentration drops below 8 g/dl.
7. Removal of retained placental products under general anaesthesia.

2. Puerperal Pyrexia:

When is puerperal pyrexia present?

- A patient has puerperal pyrexia if her oral temperature rises to 37,5 degrees celcius or higher higher on 2 or more occasions during the first 14 days postpartum.

Why is puerperal pyrexia important?

- Because it may be caused by serious complications of the puerperium. Breast feeding may be interfered with. The patient may become very ill or even die.

What are the causes of puerperal pyrexia?

- Genital tract infection
- Urinary tract infection
- Mastitis or breast abscess
- Superficial leg vein thrombophlebitis
- Respiratory tract infection
- Other infections

General management of mother presenting with puerperal pyrexia

History and systems review

a) Ask the patient what she thinks is wrong with her.

b) Specifically ask for symptoms which point to:

- An infection of the throat or ears
- Mastitis or breast abscess
- A chest infection
- A urinary tract infection
- An infected abdominal wound if the patient had a caesarian section or a puerperal sterilization
- Genital tract infection
- Superficial leg vein thrombophlebitis

Examination: system by system (head to toe)

- Throat and ears
- Breasts
- Chest
- Abdominal wound, if present
- Urinary tract
- Genital tract
- Legs, especially the calves

Investigations where possible:

- Cervical swab
- Midstream or catheter specimen of urine
- Full blood count or haemoglobin

Treatment: start broad spectrum antibiotics

Genital Tract Infection

Genital tract infection (or puerperal sepsis) is caused by the bacterial infection of the raw placental site or lacerations of the cervix, vagina or perineum. It is usually caused by the group A or B streptococcus, staphylococcus aureus or anaerobic bacteria.

Diagnosis

History

- Preterm or prelabour rupture of the membranes, a long labour, operative delivery or incompleteness of the placenta or membranes may have occurred.
- The patient will feel generally unwell.
- Lower abdominal pain

Examination

- Pyrexia, usually developing within the first 72 hours after delivery. Rigors may occur.
- Marked tachycardia
- Lower abdominal tenderness
- Offensive lochia
- The episiotomy wound or perineal or vaginal tears may be infected.
- If and where possible, a cervical swab should be taken for microscopy, culture and sensitivity tests.

Management

Prevention

- Strict asepsis during delivery
- Reduction in the number of vaginal examinations during labour to a minimum
- Prevention of unnecessary trauma during labour.
- Isolation of infected patients
- Identification and prevention of long labor
- delay artificial rupture of membranes until close to full dilatation

Treatment

a) Admit the patient to hospital

b) Institute measures to bring down the temperature e.g. tepid sponging

c) Analgesia e.g. Paracetamol 1g (2 adult tablets|) orally 6 hourly

d) Adequate fluid intake with strict intake and output measurement.

e) Broad spectrum antibiotics e.g. Ampicillin, Gentamycin and Metronidazole (AGM). If the patient is to be referred, antibiotic treatment must be started before transfer.

f) A full blood count or haemoglobin measurement must be done.A low haemoglobin of less than 8g/dl may necessitate blood transfusion.

g) Removal of all stitches if the wound is infected.

h) Drainage of any abscess and removal of necrotic tissue.

Management of a mother with offensive lochia

- If the patient has a pyrexia she must be admitted to Hospital and be treated as above
- If the involution of the patient's uterus is slower than expected and the cervical OS remains open, retained placental products are present. An evacuation of the uterus under General Anaesthesia must be done.
- If the patient has a normal temperature and normal involution of her uterus, she can be managed as an out-patient with oral Amoxycillin and and Metronidazole.

OFFENSIVE LOCHIA IS AN IMPORTANT SIGN OF GENITAL TRACT INFECTION

Urinary Tract infection

Diagnosis

History

- The patient may have been catheterized during labour or in the peuperium
- Lower abdominal pain and/or pain in the lower back over one or both e kidneys (the loins).
- Dysuria and frequency. However, these are not reliable symptoms of urinary tract infection.

Examination

- Pyrexia, often with rigors (shivering)
- Tachycardia
- Suprapubic tenderness and or tenderness, especially to percussion, over the kidneys (renal angles).

Investigations

- Microscopy of a midstream or catheter specimen of urine usually shows large numbers of pus cells and bacteria.
- Culture and sensitivity tests of the urine must be done if the facilities are available.

Management of Mother with Urinary Tract Infection

Prevention

Avoid catheterization whenever possible. If catheterization is essential, it must be done with strict aseptic precautions.

Treatment

a) Admit the patient to hospital

b) Measures to bring down the temperature

c) Analgesia e.g. Paracetamol 1g orally 6 hourly

d) Adequate fluid intake

e) Intravenous Ampicillin 2g immediately and then 1g 6 hourly

Mastitis

Superficial Leg Vein Thrombophlebitis

This is non-infective inflammation and thrombosis of the superficial veins of the leg. Thrombophlebitis commonly occurs during the puerperium, especially in varicose veins.

Diagnosis

History

- Painful swelling of the leg
- Presence of varisoce veins

Examination

- Pyrexia

- Tachycardia
- A localized area of the leg which is swollen, red and tender

Management

- Analgesia, e.g. Aspirin 300mg (1 adult tablets) 6 hourly
- Support the leg with an elastic bandage
- Encourage the patient to walk around

Lower Respiratory Tract Infection (pneumonia, bronchitis, lung abscess)

Diagnosis

History

- The patient may have had General Anaesthesia with endotracheal intubation e.g. for a caesarian section.
- Cough, which may be productive
- Pain in the chest
- A recent upper respiratory tract infection

Examination

- Pyrexia
- Tachypnoea (breathing rapidly)
- Tachycardia
- Basal dullness
- Crepitations
- Bilateral rhonchi

Investigations

- A chest X-Ray is useful but not essential
- A full blood count
- Sputum for microscopy, culture and sensitivity

Management

Prevention

- Skilled anaesthesia and more use of regional anaesthesia for caesarean section
- Proper care of the patient during induction and recovery from anaesthesia
- Encourage deep breathing and coughing following an general anaesthetic to prevent lower lobe collapse.

Treatment

a) Admit the patient to hospital unless the infection is very mild.

b) Oxygen if required

c) Ampicillin intravenously

d) (or oral amoxicillin depending on the severity of the infection

e) Analgesia e.g. Paracetamol, 1g 6 hourly

f) Physiotherapy.

Other infections that may cause puerperal pyrexia

Tonsilitis, Flu viruses, Malaria, Acute appendicitis,

3. Preeclampsia and Eclampsia:

Pre-eclampsia and eclampsia are hypertensive disorders in pregnancy and thepostnatal period. A recent five year prospective study conducted by Tuffnell et al (2005) revealed that 32% of eclampsia occurred postnatally. (For management refer to the Emergency Obstetric Care Manual)

4. Venous Thromboembolism

Deep Vein Thrombosis

Leg pain or discomfort (especially in the left leg), swelling, tenderness, increased temperature and oedema, lower abdominal pain and elevated white cell count.

Pulmonary Thromboembolism (PTE)

Dyspnoea, collapse, chest pain, haemoptysis, faintness, raised JVP (jugular vein pressure), focal signs in chest and symptoms and signs associated with DVT.

According to WHO (World Health Organization 2003d), the signs and symptoms of DVT are: 'spiking fever despite antibiotics, calf tenderness'.

These patients need hospital admission, anticoagulation and for PTE intensive care admission.

1. Major puerperal psychiatric conditions:

Temporary postnatal depression

Post-natal depression is much commoner that is generally realized. It may last for months or even years and patients may need to be referred to a Psychiatrist.

Patients with postnatal depression usually present with a depressed mood that cannot be relieved, a lack of interest in their surroundings, a poor or excessive appetite, sleeping difficulties, feelings of inadequacy, guilt and helplessness And sometimes suicidal thoughts.

Puerperal Psychosis

Puerperal psychosis is an uncommon but very important condition. The onset is usually acute and an observant attendant will notice the sudden and marked change in the patient's behavior. She may rapidly pose a threat to her infant, the staff or herself. Such a patient must be referred urgently to a Psychiatrist and will usually need admission to a Psychiatric Unit. Patients with puerperal psychosis are unable to care for themselves or their infants. They are often disorientated and paranoid and may have hallucinations. They may also be severely depressed or manic

chapter five

INFANT POSTNATAL CONDITIONS

A. Commonly Occurring Infant conditions

Hiccuphs

Hiccuphs are caused by sudden contractions of the diaphragm triggered by irritation or stimulation of that muscle. Some leading pediatricians are of the opinion that infant hiccups are usually caused by feeding (breast, formula or other foods) or by a drop in temperature that causes the baby to get cold. Hiccuphs are considered harmless unless they prove persistent enough to interfere with regular feeding and sleeping.

Nappy rash

For babies with nappy rash the following possible causes should be considered:

- hygiene and skin care
- sensitivity to detergents, fabric softeners or external products that have contact to the skin
- presence of infection.

To prevent nappy rash

- Use petroleum based lubricants or barrier creams containing zinc oxide (recommendation based on expert opinion)
- To treat rash resulting from contact irritants Protect skin with a barrier cream containing zinc oxide (recommendation based on expert opinion)
- Identify Candida albicans rash by presence of red satellite lesions.

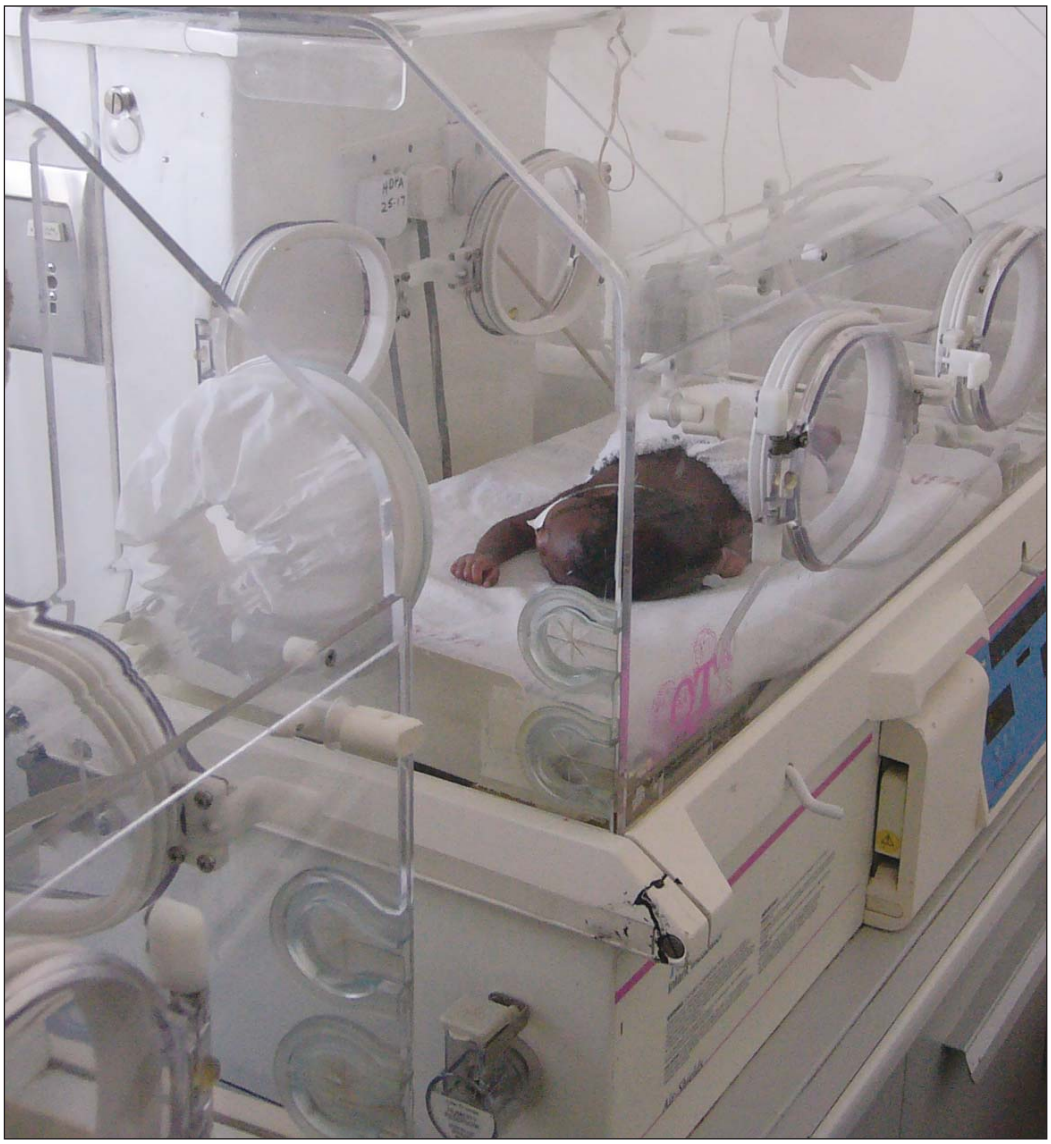
If painful nappy rash persists it is usually caused by thrush and treatment with anti-fungal treatment should be considered.If after a course of treatment the rash does not resolve, referral to a doctor is done.

Persistent crying

The baby cries persistently and/or wriggles or draws its knees to the abdomen. This is sometimes called infantile colic.A baby who is crying excessively and inconsolably, most often during the evening, should be assessed for an underlying cause but most of the time the mother needs to be

reassured as these phase usually passes and has no harm. Assessment should include:

- general health of the baby
- antenatal and perinatal history
- onset and length of crying
- nature of the stools
- feeding assessment
- woman's diet if breastfeeding
- family history of allergy
- parent's response to the baby's cry
- any factors which lessen or worsen the crying.



Most over the counter treatments for 'colic' have not been found to be of any value.

Thrush

Newborn babies are immunologically immature and more susceptible to infection.If thrush is identified in the baby, the breastfeeding woman should be offered information and guidance about relevant hygiene practices. If thrush is non-symptomatic, the woman should be advised that antifungal treatment is not required. Thrush should be treated with an appropriate antifungal medication (egnystatin oral drops) if the symptoms are causing pain to the woman or the baby or feeding concerns to either.

A. Potentially Life Threatening Infant conditions

Jaundice

During the first week of life approximately 50% of term infants have visible signs of jaundice. Some of the common causes of jaundice are:

- Physiologic jaundice due to increased red blood cell volume and immaturity of the liver function in the newborn.
- Increased breakdown of red blood cells due to blood group and Rhesus incompatibility
- Decreased conjugation of bilirubin due to prematurity

- Increased reabsorption of bilirubin from the gastointestinal tract due to asphyxia, delayed feedings, bowel obstruction, delayed passage of meconium.
- Impairment of bile excretion due to sepsis, hepatitis, biliary atresia, cholestatic syndromes
- Breast milk jaundice, cause unknown

Most jaundice is benign, but because of the potential toxicity of bilirubin, all newborn infants must be monitored to identify those who might develop severe hyperbilirubinemia. Jaundice before 24 hours of age is always considered pathological and requires further evaluation

High Temperature (Fever)

Fever is defined as the endogenous elevation of at least one measured body temperature of > 38 degrees celcius. All febrile infants less than 28 days of age should be hospitalised for parenteral antibiotic therapy as clinical evaluation of febrile babies is inadequate to reliably exclude serious bacterial infection.

Ophthalmianeonatorum

This is a purulent discharge from the eyes occurring within the first month of birth

It is a common disease of the newborn. The most frequent cause of purulent conjunctivitis in the first month of life is Chlamydia trachomatis. More dangerous is gonococcal conjunctivitis which may lead to keratitis and blindness. Treatment is by parenteral antibiotics. Routine prophylaxis by applying tetracycline eye ointment within 1 hour of birth is recommended; it reduces the transmission rate from mother to newborn considerably.

Lethargic, Inability to pass urine or stool in 24 hours, Inability to breast feed, Projectile vomiting:

These infants need to be referred to a doctor for assessment and further management.

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