Chapter 3

CARE OF A NORMAL NEWBORN AT BIRTH
AND BEYOND

Learning objectives:

After completion of this module the participant should be able to-

1. Provide care at birth
2. Identify babies who may need special care
3. Provide post natal care for normal babies
4. Recognize minor physical peculiarities and problems

Care at birth

The basic principles of care following birth are same irrespective of the place of the birth and the person attending to birth (medical or paramedical personnel). The aims of neonatal care following birth include the following:

- Establishment of respiration
- Prevention of hypothermia
- Establishment of breast feeding
- Prevention of infection
- Detection of danger signs

After having ensured that the baby has established effective breathing, it is essential that all efforts are made to prevent the occurrence of hypothermia. The baby should be promptly dried and effectively covered with pre-warmed clothes. A sterile disposable delivery kit should be used for each baby to prevent infection.

Care of umbilical cord:
Cord should be cut with a sterilized blade. The umbilical cord should be tied using two ligatures or a disposable clamp. The cord clamp or ligature should be applied at least 2 or 3 cm beyond the base of the cord.

Vitamin K:
Vitamin K should be administered intramuscularly on the antero-lateral aspect of the thigh using a 26 gauze needle and one ml syringe (Figure 3.1). Dose to be used is 0.5 mg for babies weighing less than 1000 g and 1.0 mg for those weighing above a 1000 gm at birth. The baby must have an identification tag before being transferred out of the labour room.
Quick but thorough clinical screening is essential to identify any life threatening congenital anomalies and birth injuries.

- Inspect the cut end of the cord for number of vessels - Two umbilical arteries and one umbilical vein.
- The infant should be examined for anal and esophageal patency.
- The oral cavity must be examined to exclude cleft palate.
- Displacement of the heart towards the right side in association with respiratory difficulty and difficult resuscitation is suggestive of either diaphragmatic hernia or pneumothorax on the left side.
- Examine the back for any swelling or anomaly.

Identification of ‘At Risk neonates’ needing hospitalization in SCNU:

- Babies with Birthweight < 1800 gms
- Babies with Gestation < 34 weeks
- Babies with major congenital malformations
- Babies with asphyxia (Needing post-resuscitation care)
- Babies with breathing difficulty

Postnatal Care

Maintenance of body temperature:

- Keep the baby dry at all times.
- Delay bath for at least 24 hrs.
- Adequate clothing using cap and socks. During winter, the linen and clothes of the baby should be pre-warmed before dressing.
- The room should be kept warm in winter with the help of heater. The baby should be nursed in close proximity to the mother so that the baby is kept warm by maternal warmth.
- During summer months, depending upon the environmental temperature, the baby should be dressed in loose cotton clothes and kept indoors as far as possible.
- Exposure of the baby to direct sunlight during the hot summer months can lead to serious hyperthermia.
Breast feeding:
- Mother should be advised to put the baby to the breast as soon as possible.
- Most babies can be put to the breast within half to one hour of birth.
- Do not give any pre-lacteal feeds like ghutti, tea, sugar water, jaggery, honey etc.
- During the first two to three days relatively small quantity of highly concentrated milk known as colostrum is produced which has anti-infective properties. It is most suited to serve the immediate biological needs of the baby.
- The mother should be advised to feed the baby every two to three hours on a semi-demand schedule both during day and night. During each feed, one breast should be completely emptied before the baby is put to the other breast.

Skin care:
- The baby should be bathed or sponged on the next day after birth using soap and lukewarm water. Special precautions must be taken during bath to prevent draught and chilling.
- Vigorous attempts should not be made to scrub off the vernix caseosa which provides a protective covering to the delicate skin of the baby.
- Keep the baby clean and dry.
- During the winter months, instead of bathing, the baby can be sponged daily to avoid unnecessary exposure and risk of hypothermia.

Care of the umbilical stump:
- Umbilical stump should be inspected after 2 to 4 hours of birth. Bleeding may occur at this time due to shrinkage of cord and loosening of the ligature.
- The cord must be left open without any dressing. Do not apply any medication on the cord.
- The cord usually falls after 4 to 10 days.
- The stump should be inspected for any discharge or infection and kept clean and dry till complete healing takes place.

Care of the eyes:
- Routinely no eye care is required. If the eyes are sticky, they can either be managed by frequent cleaning using sterile cotton swabs soaked in normal saline or by instillation of antibiotic eye drops every two to four hours.
- Some neonates may develop persistent epiphora (watering) due to blockage of nasolacrimal duct by epithelial debris. The mother should be advised to massage the nasolacrimal duct area (by massaging the either side of the nose adjacent to the medial canthus) 5 to 8 times daily, each time before she feeds the baby.
- Avoid the use of kajal as it may transmit infections or may even cause lead poisoning.

Weight record:
- Most healthy term babies lose weight during the first 2 to 3 days of life. The weight loss can be up to 5 to 10 percent of the birth weight. The weight remains stationary during next one to two days and birth weight is regained by the end of first week. Delayed feeding and unsatisfactory feeding schedule may be associated with excessive weight loss.
• An adequately fed baby passes urine at least 5 to 6 times in a day while many babies pass urine (even stools) after each feed during the first 3 months of life.
• The average daily weight gain in term babies is around 30 g per day.

Immunizations: It is recommended to give BCG, zero dose of oral polio vaccine and Hepatitis B vaccine as early as possible preferably within the first week of life. Table 1 depicts the Immunization Schedule (Table-3.1).

<table>
<thead>
<tr>
<th>Age</th>
<th>Vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-7 days</td>
<td>BCG, OPV and HBV</td>
</tr>
<tr>
<td>6 weeks</td>
<td>OPV, DPT, HBV</td>
</tr>
<tr>
<td>10 weeks</td>
<td>OPV, DPT, HBV</td>
</tr>
<tr>
<td>14 weeks</td>
<td>OPV, DPT, HBV</td>
</tr>
<tr>
<td>9 months</td>
<td>Measles</td>
</tr>
<tr>
<td>12-15 months</td>
<td>MMR</td>
</tr>
<tr>
<td>18 months</td>
<td>OPV, DPT</td>
</tr>
<tr>
<td>School entry (4-5 years)</td>
<td>OPV, DPT</td>
</tr>
<tr>
<td>10 years</td>
<td>dT (every 5 years)</td>
</tr>
</tbody>
</table>

Developmental variations & Physiological conditions

Knowledge of developmental variations, physiological conditions and their evolution in newborns is important for advising and assuring the mother. Mothers observe their babies very carefully and are often worried by minor physical peculiarities, which may be of no consequence and do not warrant any therapy.

Mastitis neonatorum

Engorgement of breasts occurs in term babies of both sexes on the third or fourth day and may last for days or even weeks which is due to persistence of maternal hormones for some time. Local massage, fomentation and expression of milk should not be done as it may lead to infection. Mother should be reassured that this regresses on its own.

Vaginal bleeding

Vaginal bleeding may occur in female babies about three to five days after birth which is because of withdrawal of maternal hormones. The bleeding is mild and lasts for two to four days.
• Additional vitamin K is unnecessary.
Mucoid vaginal secretions

Most female babies have a thin, grayish, mucoid, vaginal secretion, which should not be mistaken for purulent discharge.

Toxic erythema or Erythema neonatorum

This is an erythematous rash with a central pallor appearing on the second or third day in term neonates which begins on the face and spreads down to the trunk and extremities in about 24 hours. This should be differentiated from pustules which need treatment. It disappears spontaneously after two to three days without any specific treatment. The exact cause is not known.

Normal phenomena in new born

Peeling skin: Dry skin with peeling and exaggerated transverse sole creases is seen in all postterm and some term babies.
Milia: Yellow–white spots on the nose or face due to retention of sebum, are present in practically all babies and disappear spontaneously.
Storkbites (Salmon patches or nevus simplex): These are discrete, pinkish-gray, sparse, capillary hemangioma commonly seen at the nape of neck, upper eyelids, forehead and root of the nose. They invariably disappear after a few months.
Mongolian blue spots: In babies of Asiatic origin irregular blue areas of skin pigmentation are often present over the sacral area and buttocks, though extremities and rest of the trunk may also be affected. These spots disappear by the age of six months.
Subconjunctival hemorrhage: Semilunar arcs of subconjunctival hemorrhage is a common finding in normal babies. The blood gets reabsorbed after a few days without leaving any pigmentation.
Epstein Pearls: These are white spots, usually one on either side of the median raphe of the hard palate. Similar lesions may be seen on the prepuce. They are of no significance.
Sucking callosities: The presence of these button like, cornified plaques over the centre of upper lip has no significance.
Tongue Tie: It may be in the form of a fibrous frenulum with a notch at the tip of the tongue. This does not interfere with sucking or later speech development.
Nonretractable prepuce: The prepuce is normally nonretractable in all male newborn babies and should not be diagnosed as phimosis. The urethral opening is often pinpoint and is visualized with difficulty. The mother should be advised against forcibly retracting the foreskin.
Hymenal tags: Mucosal tags at the margin of hymen are seen in two-thirds of female infants.
Umbilical hernia: Umbilical hernia may manifest after the age of two weeks or later. Most of these disappear spontaneously by one or two years of age.
Vomiting

Many normal babies regurgitate or spit out some amount of milk, this regurgitation or vomiting seen soon after feeds is often due to faulty technique of feeding and aerophagy. Proper advice regarding feeding and burping, must be imparted to all mothers.

If the vomiting is persistent, projectile, or bile stained, the baby should be further investigated.

Stool pattern

Any baby who has not passed meconium for 24 hrs after birth needs to be evaluated.

Transitional stools are passed on the third and fourth day after birth. The frequency is increased and these are often semi-loose and greenish-yellow. This settles within 24 to 48 hours. Baby continues to feed well and there is no need for treatment.

Breast fed babies pass frequent golden yellow, sticky, semi loose stools. Many babies pass stools while being fed or soon after a feed due to exaggerated gastrocolic reflex which may persist for a couple of weeks. These infants continue to gain weight satisfactorily & mother should be reassured.

The increased frequency of breast milk stools is normal and should not be confused with diarrhea.

Some normal breastfed baby may pass stools infrequently (once every few days) This is not constipation.

Formula fed babies generally have more formed stools.

Excessive crying

During the first few days of life babies sleep throughout the day and they are awake, noisy and troublesome during the night.

Babies cry when they are hungry or in discomfort.

Discomfort may be due to the unpleasant sensation of a full bladder before passing urine, painful evacuation of hard stools or mere soiling by urine and stools.

An experienced mother or nurse can usually distinguish between the cry used as a signal for food and the cry of discomfort.

Persistent crying needs examination and detailed evaluation for inflammatory conditions and other causes.

The infant should be closely watched for following danger signs

- Bleeding from any site,
- Appearance of jaundice within 24 hours of age or yellow staining of palms or soles,
- Failure to pass meconium within 24 hours or urine within 48 hours,
- Persistent vomiting or diarrhea, poor feeding, undue lethargy or excessive crying, drooling of saliva or choking during feeding, respiratory difficulty, apneic attacks or cyanosis, sudden rise or fall in body
temperature, seizures and evidence of superficial infections such as conjunctivitis, pustules, umbilical sepsis, oral thrush, etc.

**Follow up.** Each baby should be followed up in the well baby clinic for assessment of growth and development, early diagnosis and management of illnesses and health education of parents. It is preferable that every baby is seen and assessed by a health worker at each immunization visit.
EVALUATION

1. Enumerate principles of newborn care at birth.

2. Enumerate principles of care of umbilical cord

3. How will you take care of the eyes of a newborn?

4. Mention the steps taken to prevent hypothermia in a newborn.

5. Enumerate the danger signs requiring referral to a higher centre.