

PROBLEMS OF THE NEWBORN

1. Breathing Problems

Birth asphyxia and resuscitation immediately after birth are discussed in chapter 4. Breathing problems can also start hours or days after birth. These may be caused by infection, heart or lung disease, abnormal body temperature, low blood sugar, or other illnesses.

When the newborn has a breathing problem, all his energy is used trying to get enough oxygen into the body. This means that the newborn does not have enough energy to keep warm, to grow, or to fight off infections. Breathing problems, therefore, often lead to death.

2. Infections

Infections are one of the major causes of newborn death, even though they can be prevented and treated. It is important to remember that small, untreated, localized infections can spread and become serious life-threatening infections.

2.1 Generalized infection: newborn sepsis

Sepsis is an infection affecting the whole body. The infection may be in the blood (septicemia) or in one or more organs of the body. Organisms that cause sepsis may enter the baby during pregnancy, during labor and birth, or after birth. They can spread through the body from an infection of the skin, or cord, or other organ. Sepsis is a serious illness and can quickly cause death.

How to help prevent newborn sepsis

- Treat a mother's infections during pregnancy.
- Use clean delivery practices during labor and birth.
- Use infection prevention steps during labor, birth, and postnatal care.
- Wash your hands before and after handling each newborn.
- Teach the mother and family to use infection prevention steps, especially handwashing.
- Treat a mother with antibiotics during labor if she has signs of infection or prolonged rupture of the bag of waters (more than 18 hours).
- Treat a newborn with antibiotics after birth if the mother had fever during labor.
- Breastfeed the newborn exclusively.
- Do not bring the baby into contact with sick people. Isolate a sick newborn from healthy ones.
- Teach the mother and family to keep the baby away from sick people.

2.2 Localized infections

A localized infection is an infection in a certain part of the baby's body (cord, skin, eye, or mouth). Any newborn infection is serious because it can spread quickly through the newborn's small body and cause neonatal sepsis. Quick and correct treatment of localized infections may prevent sepsis and possible death.

2.2.1 Umbilical Cord Infection

This is an infection around the umbilical cord or the umbilicus. This infection can easily pass through the cord into the rest of the baby's body and lead to sepsis and death, if treatment is delayed or not given. If substances such as powder, clay, dirt, or dung are put on the cord, there is a danger of tetanus or sepsis, which often lead to death.

How to prevent umbilical cord infection

- Always use infection prevention steps during birth and newborn care.
- Cut the cord with sterile scissors or a new razor blade.
- Keep the umbilical cord uncovered, clean, and dry. Avoid putting anything on the cord.
- Give only sponge baths (do not immerse the baby in water) until after the cord falls off and heals.

2.2.2 Skin Infection

Infection of the newborn's skin causes small pustules (pus-filled blisters) on the skin. A skin infection that is not treated may spread. A skin infection can become serious and develop into a deeper infection or blood infection (septicemia), which are life threatening.

How to prevent a skin infection

- Always use infection prevention steps for birth and postnatal care.
- Do not wash off the vernix (creamy white substance on a newborn's skin) after birth; the vernix protects the newborn's skin.
- Always wash your hands before and after handling each newborn.
- Teach the mother and family to wash their hands before caring for their newborn.
- Teach the mother and family to keep the baby's room, covers, and clothing clean.
- Keep flies away from the newborn.
- Teach the mother how to bathe the baby.

2.2.3 Eye Infection

An eye infection is an infection of the lining of the eyes. The eyelids become swollen and red, and there is fluid or pus in the eyes. Many different organisms cause eye infections. Some sexually transmitted infections of the mother, such as gonorrhea and chlamydia, can cause newborn eye infection. These and other organisms can infect the baby during birth. Less serious eye infections may be caused by germs from the baby's surroundings.

2.2.3 Oral Thrush

Thrush is an infection of the mouth caused by a fungus or yeast. The thrush fungus lives in wet, warm places. It is normal to have a little of this fungus in our mouths. This fungus can also grow in the vagina. At certain times it can grow so much that it causes an infection. Babies can get this infection easily in the first few months of life, since their immune system is not well developed.

How does thrush affect the newborn and the mother? Thrush covers the newborn's mucous membranes and tongue with a white coating. It makes the mouth painful so the baby may not be able to feed, even though he is hungry. A baby can become very ill quickly because of poor feeding. This then causes weight loss and dehydration. The infection can also go through the baby's stomach and intestines and into the stool. When this happens the infection can spread to the baby's buttocks, causing a painful red rash. It is important to treat thrush as soon as possible.

The fungus infection can also pass to the mother's nipples. The mother will notice that her nipples are sore and red. She will feel breast pain when the baby breastfeeds.

How to prevent thrush:

The mother should be encouraged to breastfeed exclusively from birth. This will transfer immune substances from the mother to the newborn. Teach the mother to:

- Wash her hands before and after caring for the baby
- Wash anything that will touch the newborn (cups, clothing)
- Get medical care for any signs of thrush as soon as possible

3. Jaundice

Jaundice is a yellow color of the skin and/or the eyes. It may be physiologic (normal) jaundice or serious (dangerous) jaundice.

In normal babies jaundice sometimes starts after the second postnatal day and goes away by 2 weeks. This is called physiologic jaundice. It is caused by the baby's body breaking down extra red blood cells after birth. When the red blood cells break down, they release a substance called bilirubin. The bilirubin causes the yellow color. The baby's liver usually gets rid of the extra bilirubin and then passes it out of the body in the stool. The health of the newborn is not affected by physiologic jaundice.

The newborn baby gets rid of bilirubin slowly because the liver is immature. Extra bilirubin makes the skin and eyes yellow. The yellow color starts first on the head and moves down the body as the bilirubin level increases.

Serious jaundice occurs when the bilirubin in the blood becomes very high. For example: a baby with a blood disease or sepsis may make too much bilirubin; a baby that is low birth weight (less than 2500g) or premature, not sucking well, or not passing stool, may not be able to get rid of the bilirubin. If the baby has serious jaundice, the extra bilirubin may affect the baby's brain and cause brain damage.

You know the jaundice is serious when the yellow color:

- starts during the first 24 hours of life,
- affects arms and legs on day 2,
- affects hands and feet on day 3 or thereafter,
- lasts longer than 2 weeks, or
- occurs with another danger sign.

How to prevent brain damage from serious jaundice:

- Refer babies to get medical care for any sign of serious jaundice
- Follow up babies closely if they are at risk for serious jaundice:
- Low birth weight babies
- Babies with problems at birth, such as those needing resuscitation
- Babies with any signs of infection
- Babies who do not feed well

4. Bleeding from the umbilical cord

Bleeding from the umbilical cord is a problem of the first day or two of life. The cord tie or clamp may become loose as the cord begins to dry, so it starts to bleed. After the cord dries up, it will no longer bleed. The baby's small body does not have much blood.

Losing a small amount of blood is serious for the baby and can cause death.

5. Problems from the mother's pregnancy and labor

If a mother had any of the following health problems during pregnancy or labor, the baby needs treatment to prevent infection. Review the mother's records to check for problems. If there is no antenatal record, ask the mother if she had any of these problems during the pregnancy or labor:

- Syphilis
- Tuberculosis
- Maternal infection in labor

5.1 Syphilis

Syphilis is a sexually transmitted infection which often leads to abortion, stillbirth, preterm labor, low birth weight, and fetal infection. The mother may be infected without noticing any symptoms. Syphilis infects the fetus of an infected mother who does not get treatment during pregnancy. The untreated baby may develop long-term developmental and neurological disabilities.

The newborn may show signs of congenital syphilis within a few weeks or months of birth. These signs include:

- Snuffles (obstructed breathing through the nose)
- Cracks and fissures around the mouth, nose, and anus
- Skin rashes or blisters and peeling on the palms of the hands and soles of the feet
- Distended abdomen
- Respiratory distress
- Jaundice

The newborn may develop other serious complications if the syphilis is not treated.

If the mother is suspected of having syphilis, or if she had a positive syphilis test (VDRL or RPR) in pregnancy but did not receive treatment, or was reinfected:

- Refer the baby to a facility where diagnosis and treatment is available
- Give the baby a single dose of benzathine penicillin 50,000 units/kg IM at birth
- Advise the parents that the baby needs additional treatment and follow-up
- Refer the mother and her partner for screening and treatment

5.2 Tuberculosis

Tuberculosis (TB) is a lung infection. It is passed when a sick person coughs germs into the air that other people breathe. TB can spread to other parts of the body, may last for many years, and can take a long time to cure. The woman's poor health may slow the growth and development of the fetus.

Note: Treating a pregnant or breastfeeding mother with streptomycin has a harmful effect on her baby.

If the mother has tuberculosis and was sputum- positive within 2 months of the birth, refer the newborn and the mother to a higher-level health facility for treatment. The mother should still be advised to breastfeed her child.

5.3 Maternal infection in labor

If the mother had signs of acute infection in labor, the baby is at risk for sepsis and should be treated with antibiotics. There is a high risk of maternal infection if the membranes ruptured more than 18 hours prior to the baby's birth.

Signs of acute maternal infection during labor include:

- Fever
- Chills
- Foul-smelling vaginal discharge

Care for the newborn:

- Stabilize the newborn by making sure the baby is warm and has breastfed.
- Refer the baby, following the Referral Guidelines.
- Give a first dose of antibiotics:
 - For a baby 2 kg or more: ampicillin 50 mg/kg IM and gentamicin 5 mg/kg IM
 - For a baby less than 2 kg: ampicillin 50 mg/kg IM and gentamicin 4 mg/kg IM