

Module 15 : Neonatal Sepsis : Diagnosis and Management with injectable antibiotic

Session 1 : Revisiting diagnosis of neonatal sepsis and treating with cotrimoxazole

Day : 2

Time Required : 2 hours 35 minutes

Purpose

ASHAs have learnt diagnosis and treatment of sepsis with cotrimoxazole in earlier Training Workshop. They have revised it and also passed the examination. In this workshop they are going to learn treatment of sepsis with cotrimoxazole and injection gentamicin. In this session they will revise the newborn sepsis upto the management with cotrimoxazole.

Objectives

At the end of the session the ASHA will be able to:

1. Explain what sepsis is, how it is caused, and why is it dangerous.
2. Diagnose sepsis in the neonate.
3. Explain how sepsis can be prevented.
4. Management of sepsis with cotrimoxazole.

Materials

- Reading Material : Neonatal Sepsis : Information sheet (povided in Reading Material)
- Training Aid 1 : Case Presentation in Session
- Worksheet 1 : Case Studies
- Training Aid 2 : Answers to Case Studies

Preparation

- Instruct the trainees in advance to bring their copies of the Newborn Form Booklet and the Reading Material.
- Prepare copies of the Worksheet 1 depending on number of trainees

Training Methods

Presentation and Discussion (1 hour)

Instructions to Trainers :

1. Tell the following story:
Janaki gave birth to a baby girl on Saturday. She was born healthy. On the 3rd day she developed pus in umbilicus, on 7th day her body became cold.
2. Ask ASHAs : 'What disease is this baby suffering from?' Listen to their answers. Praise them if correct. If they do not know, explain that this baby has sepsis, another word for a severe infection. Refer to the definition (see Content Box below).

Content Box :

Definition: Sepsis is a word meaning infection.

In the newborns, sepsis refers to any serious infection in the baby whether in the lungs, brain or blood.

How big is the problem ?

In rural India, nearly 1 out of 10 newborns develop condition suggestive of sepsis. Sepsis in the first month of life is very serious and can cause death of the baby. If not treated, many of the babies with sepsis will die. With treatment, most will live and grow up normally.

3. Ask if any ASHA had any personal experience in the previous two months of a baby who had sepsis. What happened to the baby?
4. Explain that sepsis is very serious. This is the most common killer of infants in the first month of life. Without treatment, many babies with sepsis die. With treatment, most live.
5. Ask ASHAs: 'What could be some of the causes of sepsis in the newborn?' Listen to their answers. Write them on the board or white paper. Praise ASHAs who give correct answers.
6. Ask ASHAs to refer to the Neonatal Sepsis : Information Sheet in the Reading Material. Discuss the causes and compare to ASHA's list. Add causes left out and remove any incorrect ones.
7. Explain to ASHAs that in their everyday work they are looking for early signs of infection and trying to prevent them. Infection in the mother, preterm, LBW, not breastfeeding exclusively, touching with dirty hands or clothes are the main risks for the baby developing sepsis. Early action could help prevent sepsis in the baby.
8. Emphasise that infection in the newborn can show itself locally, such as an infection of the umbilicus, or of the lungs (pneumonia) or blood. Infections in the newborn can become serious very quickly. Babies—especially preterm and LBW babies—cannot fight infection effectively. The toxins spread quickly in the body, and the baby may stop crying and feeding, & become cold. It may be hard to tell where the infection started, and since the symptoms are not very clear, the diagnosis may be missed. To help ASHAs detect sepsis, a simple method of using specific criteria has been developed (refer to the Reading Material).
9. Have ASHAs refer to the sepsis diagnosis part of Home Visit Form and read each criteria. Discuss.
10. Point out that to diagnose sepsis, **two** criteria have to be present on the same day. Why? Because one sign can be present in any baby. But if two signs or more develop, it surely indicates sepsis.
11. Also note that the first three criteria; all limbs limp, feeding less or stopped feeding, and weak cry or no cry, are not counted as criteria if such a condition was present right from the time of delivery. For these three to count, the baby would have had to be earlier free from these signs, and develop the condition only later (from normal suckling to weak or no suckling, in a newborn with flexed limbs, all limbs become limp, the cry which was normal became weak or no crying).
12. Present these examples:
 - a. Baby Bindi was born with a weak cry and weak breathing. This condition continued for four days. On the 3rd day she became cold. Would you diagnose sepsis? (No) Why not? (*The only criteria met on day 3 is 'became cold'. She had a weak cry and breath from birth so it does not count as a new criteria*). On the 4th day she developed abdominal distention and was still cold. What would you do? (*Diagnose sepsis because two criteria are present on the same day*)

- b. Baby Neeta was born with asphyxia. She had no cry or breath. After resuscitation she revived and her breathing and cry became normal. On the 6th day she became cold and her cry became weak. What would you do? (*Diagnose sepsis; she has two criteria, 'became cold' and 'weak cry'.*)

NOTE : If the baby has only one sign of sepsis, the ASHA should visit every day for next 3 days and watch for other sign of sepsis. If breast feeding problem or hypothermia is there, manage these according to management guidelines. If there is pus on umbilicus, treat with G.V. paint. If baby has fever with another sign of sepsis, give paracetamol and wait for one hour. Only if the fever does not become normal, and the other sign also persists then only start the treatment for sepsis.

13. Ask ASHAs if sepsis can be prevented. They should answer 'YES'. Ask them to explain how. Listen to their answers (refer to the Reading Material).
- If they say 'practicing good hygiene', ask them to be specific (*TBA washing hands before the baby is born and not putting hands inside mother, using a clean blade, ASHA and others washing hands before touching the baby, mother herself washing hands after using the toilet, or cleaning the baby's stool, sick persons not coming into the delivery room*)
 - How do they keep the baby warm? (*Immediately after delivery, dry the baby and wrap it in a dry cloth; place close to mother and start breastfeeding; have baby wear clothes; if LBW, use warm bag and / or skin to skin contact method.*)
 - What are good breastfeeding practices? (*Early initiation, on demand feeding [usually every 2-3 hours in first weeks], exclusive breastfeeding (no other fluids or foods.)*)
14. Explain that ASHAs have an important role to play in preventing sepsis and in promoting infant health during each of their visits; they must check to see that good hygiene is practiced at birth, that the baby is kept warm, especially in winters and that breastfeeding is going well.
- The ASHA should initiate breastfeeding right after delivery.
 - During home visits after delivery, ASHAs should make sure that the feeding is going well; observe breastfeeding, check how many times the baby fed during the night and day, weigh the baby.
 - The same is true for making sure the baby is warm enough. If the temperature is less than normal, the mother needs to warm the baby and make sure it is well clothed and wrapped.
 - ASHA should reinforce the practice of frequent hand-washing.

**Each Home Visit is an Opportunity to Promote Health and Prevent Sepsis.
Your Own Behaviour is the Best Teacher.**

Presentation and Discussion (15 minutes)

Instructions to Trainers :

1. Ask ASHAs what are the four parts of sepsis management ? Their answers should include following
 - Explaining the situation to parents and advising them to take the baby to the hospital. If they are unwilling to go to the hospital, getting their consent to treat the baby.
 - Giving treatment (the correct dose of medicines for the correct number of days).
 - Giving the parents advice on how to care for the baby at home, visiting the house twice daily while treating the baby, & ensuring that good care is practiced.
 - Filling in and maintaining the necessary forms.

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2. Emphasize that the length of treatment for cotrimoxazole is dependent on the length of gestation. For newborns the dose is 1/4 teaspoon given twice a day.

- Preterm babies need the medicine for 10 days.
- Full-term babies need the medicine for 7 days.

Explain that after the informed consent is given, the first dose should be given immediately. The cotrimoxazole is given by mouth in the morning and evening by the ASHA (or the mother, if she is properly trained and supervised). Emphasize that the ASHA is to visit the home two times each day until the treatment is complete; 7 days for the full-term baby, and 10 days for the preterm baby.

3. Ask ASHAs about home care advice. Listen to their answers. Explain that babies with sepsis need more care. ASHA should ensure that the mother :
 - Keeps the baby warm.
 - Breastfeed often (every two hours).
 - Gives the medication as advised.
 - Washes hands before touching the baby.
 - Calls the ASHA immediately, if the condition gets worse.
 - Takes care of other infections such as the umbilicus, skin, eye, etc.

Case Presentation in Large Group (30 minutes)

Instructions to Trainers :

1. Present the following case in the large group (Training Aid 1). Read the first part and ask a question. Allow time for answers. Discuss the answers. If an ASHA replied incorrectly, ask the group if they have any other response. Proceed with the next part of the case.
2. At the end, review the case and the actions taken by ASHAs.
3. Check for questions and clarify any doubts.

Practice/Case Studies (40 minutes)

Instructions to Trainers :

1. Distribute the Worksheet 1: Case Studies.
2. Divide ASHAs into groups of 3-4. Members of each group works on the cases jointly, discussing possible answers. (25 minutes)
3. Assemble the larger group and review the case studies. (20 minutes)
4. Check for questions. Make sure all doubts are clarified.

Summary (10 minutes)

- Ask an ASHA to explain what sepsis is and why it is important to diagnose and treat it. (*Sepsis is infection. It is common in infants in villages in India and can cause death unless treated early.*)
- Ask ASHAs to state the seven criteria for diagnosing sepsis.
- Ask how the sepsis is diagnosed (*Two criteria are present in the infant on the same day.*)
- Ask ASHAs what they do if only one criteria is present (visit the newborn everyday for next three days. If it is breast feeding problem, hypothermia or fever manage the problem as you have been taught).

- Ask the group how sepsis is prevented (*Clean birth, hand-washing, breastfeeding, keeping baby warm, using clean clothes, keeping infected people away from the mother and child*)
- Make corrections, if any are required, and add missing information.
- Praise ASHAs for their good work.

Evaluation of the session

Objectives	Assessment Method	Output
Explain what sepsis is, how it may be caused, and why it is dangerous.	Questions and answers	--
Diagnose sepsis in the neonate.	Case studies.	Answers to Case study by ASHAs
Explain how sepsis can be prevented.	Discussion/case studies	Answers to Case study by ASHAs
Management of sepsis with cotrimoxazole	Questions and answers	--