Early-onset bacterial infection in newborn babies

Introduction

Bacterial infections that happen within 72 hours of birth can be extremely dangerous for newborn babies if there are any delays in recognising that the baby is ill and in starting treatment. The medical name for this is ‘early-onset neonatal bacterial infection’.

The most common cause of infection in newborn babies is Group B streptococcus (GBS). This is a type of bacteria found in the gut and reproductive organs in 20% to 40% of women, although other bacteria and viruses can also make babies ill.

The presence of the bacteria is not normally associated with any symptoms or problems in mothers however GBS can be passed on around the time of birth.

What are the risk factors associated with early-onset infection?

There are several reasons why your newborn baby might have a higher than average risk of bacterial infection (these are called risk factors). For example, if:

- you have previously had a baby who had GBS
- you are carrying GBS, or you have had a group B streptococcal infection (including a GBS urine infection) during this pregnancy
- your waters broke before the start of labour. The risk of infection increases with the length of time your waters are broken before birth. If you have a known infection it is advised that you have antibiotics and induction of labour as soon as possible
- your baby was born before 37 weeks (premature birth) following spontaneous onset of labour
• your baby was born before 37 weeks and your waters broke more than 18 hours before the birth
• you have a fever with a temperature higher than 38°C, or you have a confirmed or suspected infection of the waters called chorioamnionitis
• you received antibiotics for a bacterial infection such as, blood poisoning (septicaemia) 24 hours before the birth, or at any time during labour, or within 24 hours of the birth
• you have a multiple pregnancy, for example, twins and infection is suspected or confirmed in one of the babies.

If any of these risk factors are present the midwifery staff will monitor your baby and if there are any concerns a neonatal doctor will be informed. Based on these risk factors and a detailed health check the neonatal doctors may decide to start antibiotic treatment for your baby.

What happens next if antibiotics are recommended?

The neonatal team may start antibiotics based on risk factors. Your baby may not seem unwell. However, babies with infection can become unwell very quickly so antibiotics need to be given early if there is any concern.

• The risk of side effects from antibiotics is low in newborn babies.
• Your baby will need a small cannula (a plastic tube inserted using a needle) for the antibiotics to be given into a vein usually in the arm or foot.
• Unless your baby is very unwell you will be able to continue caring for and holding your baby as you wish.
• Usually your baby will receive their antibiotics while staying on the maternity ward. You should be able to stay on the ward with your baby.

How long will my baby need antibiotics?

Before your baby starts antibiotics blood samples will be taken and sent to the laboratory for testing.

Within 2 to 4 hours an initial blood test, C-Reactive Protein (CRP), will be processed.
If the CRP is high this shows that infection is likely and other tests may need to be done such as, a chest X-ray and/or a lumbar puncture (to check for meningitis).

**After 24 hours** of the sample reaching the laboratory a different test (a blood culture) result will be available. If this test shows that there is infection your baby will need to continue antibiotics for at least 5 days, but possibly longer.

A blood test to re-check the CRP is likely to be carried out the day after antibiotics are started.

Often the CRP is low and the blood culture does not show infection. If this happens then antibiotics will be stopped after 24 to 48 hours, unless your baby has been unwell.

**What if my baby is very sick?**

Some babies may be too unwell to stay with you on the Maternity Ward, so they will be admitted to the Neonatal Unit (NNU) for treatment. Most babies will only need to be on the NNU for a day or two and can continue their antibiotics on the Maternity Ward. Others may be monitored as Transitional Care patients, but will be able to stay with you. If you have any questions please ask.

**When can I take my baby home?**

Once your baby has completed a course of antibiotics and he/she is otherwise feeding well and there are no other concerns your baby will be discharged from hospital.

**When to seek medical help**

If your baby shows any of the following signs please contact your GP or community midwife:

- changes in behaviour (such as intransible crying)
- problems feeding or tolerating feeds
- a fever.
If your baby is showing any of the following symptoms please take them to your GP straight away. Out of normal surgery hours contact NHS 111 for advice immediately:

- has an abnormal temperature not explained by the environment temperature
- rapid breathing
- change in skin colour
- being listless or unusually floppy.

**Future pregnancies**

If your baby has been treated for GBS infection, your healthcare team should have advised you that any babies you have in the future will also be at increased risk of GBS. You are should tell the maternity care team that a previous baby has had a GBS infection as you will be advised to take antibiotics during labour.

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**Further information**

NHS

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