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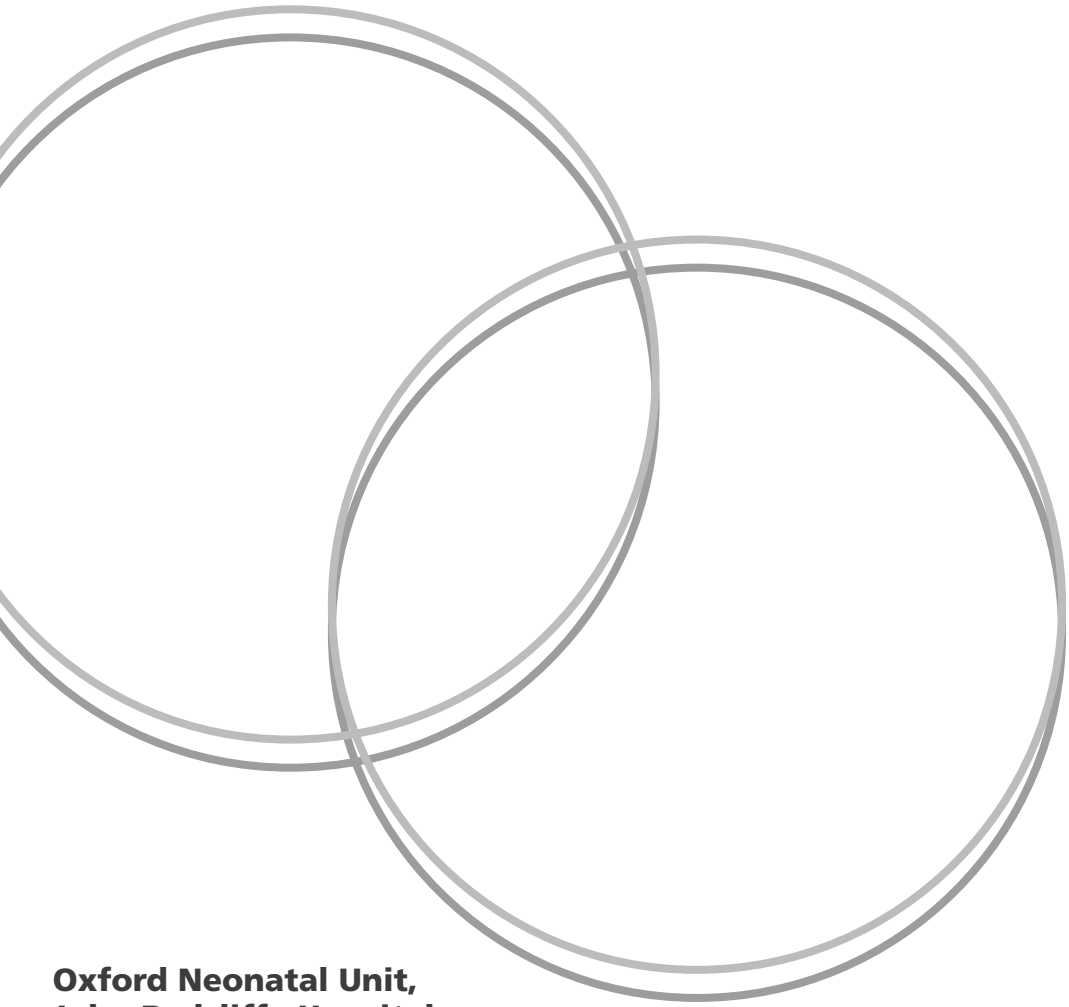
What is an ‘infection screen’?

Information for parents and carers



Oxford Neonatal Unit,
John Radcliffe Hospital

This leaflet is designed to give you information about screening your baby for infection.

What is an infection screen?

The term 'infection screen' is the name for investigations we carry out for infection. It includes blood tests and possibly a chest X-ray and a lumbar puncture. There are details of these tests later in the leaflet. An infection screen is carried out on babies who are unwell or at risk of infection. It is also called a 'septic screen'.

Why does my baby need an infection screen?

Newborn babies have a higher risk of developing serious infections. Babies can become infected whilst in the womb or they can become unwell after birth. In the early stages it is often difficult to tell if a baby has an infection, as babies do not show the signs of infection as clearly as older children or adults.

Risk factors for your baby getting an infection are:

- if your 'waters' had broken a long time before delivery (more than 18 hours)
- if your baby was born prematurely (before 37 weeks gestation)
- if you had a fever during labour
- if you are known to carry Group B Streptococcus; a bacterium which is carried by 10 to 30% of women.

However, it is possible for babies to develop infection even if these risk factors are not present.

Sometimes your baby may only have very slight signs of a possible infection or may look entirely well. However, if any of the risk factors for infection are present this may be enough of a reason for us to wish to perform an infection screen.

In these circumstances, we appreciate that your baby may not appear unwell in any way and you may feel that blood tests are unnecessary and distressing. We have a low threshold for doing an infection screen because the signs of infection are not easy to identify in small babies. Babies can also become extremely unwell very quickly. We therefore feel that it is important to be cautious.

Some babies do show signs of being unwell, such as:

- an unstable temperature (either low or high)
- problems controlling their blood sugar level
- noisy, heavy or fast breathing
- a fast heart rate
- being more sleepy, lethargic or irritable than normal.

These signs would make us concerned and we would then want to perform an infection screen.

How is an infection screen performed?

We take blood from your baby using a very small needle. This is put into a vein, usually in their arm or hand, and sometimes in their foot. We then send this to be tested for infection. The blood tests require only small quantities of your baby's blood. We may also do other investigations, depending on the circumstances.

The blood tests we perform include:

- full blood count – looking for increased white cells in the blood (white blood cells are made by the body to help to fight off infection)
- C-reactive protein levels – a so called 'inflammatory marker' or sign of inflammation somewhere in the body
- blood culture – a small amount of baby's blood is 'cultured' (grown) in the laboratory to see if there is a bloodstream infection.

Blood cultures have to be kept warm in an incubator for some time to allow the bacteria to grow and be detected. This means it can take up to 36 hours for the results to be available.

Whilst we are awaiting the results of the blood culture, we usually give babies intravenous antibiotics through a cannula (also known as a 'drip') into a vein. We do this to be on the safe side until we know whether or not your baby does have an infection. Untreated infections in newborn babies can become serious very quickly as their immunity is not well developed.

The antibiotics we give have been used for many years in babies and are effective against a wide range of bacteria. We usually stop antibiotics at 36 hours if the tests do not show an infection, as long as your baby is entirely well. If the blood cultures are 'positive' (meaning that bacteria has been grown from your baby's blood), or if any of the other blood tests show an infection, the antibiotics will be continued.

If your baby is receiving a course of antibiotics, but otherwise well, they will stay with you on the postnatal ward and you can continue to dress, hold and feed them as normal. Your baby will be given antibiotics twice daily by the neonatal nurses.

If your baby is unwell they will be admitted to the newborn care/ neonatal unit. In this case, if you are well yourself, you may be discharged from hospital and will need to make daily arrangements to visit your baby.

What further tests may be needed?

If any of the initial tests suggest that an infection is present, or if your baby has breathing difficulties, it may be necessary to try to find the source of the infection.

Other tests we may perform include:

Chest X-ray

Pneumonia is the most common bacterial infection in newborn babies. If your baby shows any signs of difficulty breathing we will perform a chest X-ray. This will show us if there is any infection or inflammation in their lungs.

Lumbar puncture

If there is evidence of infection from the initial blood tests, or if your baby is particularly unwell, we may need to exclude meningitis. To test for this, we take a very small amount of fluid from your baby's spine (spinal fluid). This is sent to the laboratory to look for white blood cells, which are made by the body if there is an infection. They will also culture the spinal fluid to see if any bacteria are present.

To perform a lumbar puncture we gently curl your baby's body into the 'fetal position' – similar to their position in the womb. Using a thin sterile needle, we take a few drops of spinal fluid from the base of your baby's back. It is similar to having an epidural in labour and babies cope with this very well. If the lumbar puncture results show that there is meningitis bacteria in the spinal fluid your baby will need a 2 to 3 week course of intravenous antibiotics.

When can my baby come home?

Depending on what is causing your baby to be poorly, they will need to continue with antibiotics for different lengths of time:

- 5 to 7 days for pneumonia
- 2 weeks for infection in the blood
- 2 to 3 weeks if there is meningitis.

You may be able to take your baby home after they have started antibiotics. Your baby will be examined by a member of the neonatal team before they are discharged from hospital. You will be given a 'Baby Check' leaflet to help you recognise signs of illness, including the return of an infection in your baby (a rare event).

Further information

For further information please speak to your midwife, a neonatal unit doctor or Advanced Nurse Practitioner.

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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