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Infection in the Newborn - Sepsis

An information guide

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Infection in the Newborn - Sepsis

Congratulations on the arrival of your new baby.

This leaflet is designed to help you understand your family's journey over the next few days and beyond.

Infection in the newborn baby can cause significant issues so prompt and thorough investigation and treatment is very important.

Your team of doctors, midwives and nurses will keep you informed and involved in decisions regarding the care of your baby. We understand this is a worrying time for you and we are always here to answer any questions you may have day or night.

Around 1 in 100 newborn babies develop an infection shortly after birth. The risk of a serious infection (sepsis) is slightly higher in the following situations:

- Mum being unwell, fever greater than 38°C in labour, and given antibiotics by a drip during labour or in the 24 hours before or after delivery.
- Baby being born before 37 weeks of pregnancy.
- The waters around the baby breaking before labour.
- Multiple births (e.g. twins) where one baby is suspected of having an infection.
- A bacteria (bug) called group B streptococcus (GBS) in Mum's urine or on vaginal swab.
- A previous baby who had group B streptococcus infection.

If any of these risk factors are present, your baby will be observed for at least 12 hours in hospital.

If your baby remained well over this period of observation, it is unlikely he/she will develop sepsis. However, it is important you are aware of the risk factors in case your baby becomes unwell at home.

If your baby becomes unwell and needs a review by a midwife, GP or in hospital (see "Health concerns in newborn babies" in your community postnatal record booklet for warning signs), it is important to tell the midwife/doctor that your baby has a sepsis risk factor as this may change the treatment your baby receives.

Group B streptococcus (GBS)

Around 1 in 2000 babies born in the UK and Ireland develop early infection with GBS. GBS is one of the many bugs that may live in and on our bodies normally. It usually doesn't cause any harm.

Approximately - 1 in 4 pregnant women carry GBS and most will go on to have healthy babies. However there is a risk that GBS could pass to the baby during childbirth and a small number of these babies may become infected. GBS infection in the newborn can cause a serious, life threatening infection.

Signs and symptoms of infection in newborn babies:

- Difficulty in breathing - fast or noisy breathing or baby working hard to breathe.
- Pale, blue or mottled skin with cold hands and feet, rashes.
- High or unusually low temperature.
- Not sucking or feeding well, vomiting, not having wet nappies.
- Altered behaviour, excessively sleepy, floppy, difficult to wake up.
- Irritable, continuous crying or high-pitched crying.

Every baby is different and you know your baby best, we are always here if you are worried about your baby, please don't hesitate to ask.

Starting your baby on antibiotics

Most newborn infections are caused by bacteria, antibiotics are effective in getting rid of these bacteria. Your baby needs to have their antibiotic medicine through a cannula into a vein to work best. A cannula is a small, soft plastic tube which holds the vein open; it is inserted using a needle which is then removed. The cannula is kept in place using a dressing and kept safe with a protective board. Your baby may need more than one cannula during their stay. The antibiotics are usually given twice a day.

One of the neonatal medical team will gently insert the cannula and take some blood for testing. The antibiotics will then be given.

It is important to keep the cannula clean and dry; if you have any concerns about your baby's cannula please contact your midwife straight away.

Blood tests

When the cannula is inserted, blood samples are taken. The first one is called a blood culture; this is monitored to see if any bacteria (bugs) grow in baby's blood. If bacteria do grow they can be identified by the microbiology doctors which can help us give your baby the right antibiotics for the correct amount of time. Sometimes babies can be very unwell without growing any bacteria in their blood. It usually takes 36 hours for the blood culture results to be available.

Infection marker blood tests are also taken. One of these is called the 'C Reactive Protein' (CRP). This is made in the baby's body if there is inflammation or infection present. CRP is made shortly after the start of an infection and its levels can rise from normal to high very quickly. This makes it useful in identifying infection, seeing the response to antibiotics and also reassuring us if the levels

remain low. It is important for us to see if the CRP is rising and so baby will need more than one blood test for this, usually 12-24 hours apart.

Another blood test we do, is called the full blood count which measures red and white blood cells and platelets. White blood cells are part of the body's defence system, they may increase if there is infection present.

If the results of your baby's blood tests suggest that infection is present we may need to do some further tests.

One of these tests is called a lumbar puncture (LP). This test can help us identify the source of any infection, help us decide how long baby needs antibiotics for and if baby needs any follow-up care. To do a lumbar puncture your baby may need to be admitted to the neonatal unit so specialist nurses can care for your baby before, during and after the procedure.

A lumbar puncture is a procedure where a small amount of the fluid (CSF or cerebrospinal fluid) that bathes the brain and the spinal cord is taken from the baby's back. Infection can be present in this fluid and it is important to treat it thoroughly - to help your baby to develop as they should.

If infection is present it is described as meningitis. If we think that your baby has meningitis we will give your baby a longer course of antibiotics and follow them up once they are home to ensure they are developing well.

We will offer your baby a small amount of a sweet liquid (sucrose) to suck as a comfort during the procedure, most babies are very calm throughout. A nurse will gently hold your baby curled up and one of the medical team will then clean their back and insert a thin hollow needle into the space between the spinal bones at the

bottom of the back. The spinal cord (nerves) finish higher up in the spine in young babies so the risk of touching this is minimal.

Sometimes no fluid can be obtained or the fluid may contain blood. This can make it difficult to interpret the results so occasionally babies have to have more than one LP. If fluid is obtained it is sent to the laboratory for the microbiology doctors to look at and to see if any bugs grow in it. Some of these results are back on the same day of the test and we will know more after 36 hours.

After the LP your baby will have a small plaster on their back and will need observations for at least 4 hours. If your baby is admitted to the neonatal unit you are always welcome on the neonatal unit and the nurses will give you all the information you need. The plaster may be removed after a few hours.

What happens during your stay?

As far as it is possible you and your baby will stay together on the post natal ward whilst your baby is on antibiotics. Welcoming your new baby into the world and enjoying their first few days is very important and we will support you in feeding and caring for them.

Breastfeeding support is always available for you, please ask your midwife.

One of the neonatal team will visit you every day and involve you in the plan of care. Care is very much guided by your baby and their response to the treatment. Your baby will need regular blood tests and will have their temperature and vital signs monitored whilst they are on antibiotics.

How long will we stay?

It is only natural to want to go home as soon as possible and we want to make sure you go home with a happy, healthy baby. Babies can become very sick very quickly so we are always cautious. If your baby remains well in themselves, has no increase in the infection markers on the blood tests and does not grow any bugs in the blood then we can consider stopping the antibiotics after 36 hours.

If your baby does not appear well, their infection markers are raised or bugs are found in any of the tests then your baby is likely to need a course of antibiotics which may be for a week or longer.

Every baby is different and we care for every baby and family as individuals. Please remember we are always here for you and your baby. We are more than happy to come and see you at any time to talk about your baby's care.

Going home

Your midwifery team will carry on your care in the community. We will write a letter to your GP explaining everything that has happened during your stay.

If you are worried about infection in your baby seek help early through your midwife, GP, call 111 or 999 in an emergency.

Remember - you know your baby best.

If English is not your first language and you need help, please contact the Interpretation and Translation Service

Jeśli angielski nie jest twoim pierwszym językiem i potrzebujesz pomocy, skontaktuj się z działem tłumaczeń ustnych i pisemnych

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For general enquiries please contact the Patient Advice and Liaison Service (PALS) on 0161 604 5897

For enquiries regarding clinic appointments, clinical care and treatment please contact 0161 624 0420 and the Switchboard Operator will put you through to the correct department / service

The Northern Care Alliance NHS Group (NCA) is one of the largest NHS organisations in the country, employing 17,000 staff and providing a range of hospital and community healthcare services to around 1 million people across Salford, Oldham, Bury, Rochdale and surrounding areas. Our Care Organisations are responsible for providing our services, delivering safe, high quality and reliable care to the local communities they serve.

The NCA brings together Salford Royal NHS Foundation Trust and the hospitals and community services of The Royal Oldham Hospital, Fairfield General Hospital in Bury, and Rochdale Infirmary (currently part of The Pennine Acute Hospitals NHS Trust).

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