Early Onset Neonatal Sepsis

This leaflet offers information about suspected early onset neonatal sepsis. If you have any further questions or concerns, please speak to the staff member in charge of your baby's care.

What is early onset neonatal sepsis and why is there a risk that my child has got it?

Sepsis is a rare but serious complication of an infection.

Newborn babies are more at risk of infections because their immune system is still developing and is less able to fight them off.

There may also be a risk of blood infection from problems in pregnancy or labour, such as:

- waters breaking more than 24 hours before labour
- an infection in the mother during or before labour such as a urinary tract infection (UTI) or a womb infection (chorioamnionitis)
- bacteria in the birth canal such as Group B Streptococcus (GBS)
- premature birth (born before 37 weeks).

If your baby is well following birth but has some of these risk factors, the information will be fed into a sepsis risk calculator (designed by Kaiser Permanente). This has been tested on large numbers of babies for accuracy in America and in the UK. The calculator gives a risk score that will help the paediatrician to decide whether to give antibiotics.

What are the signs and symptoms of a neonatal infection?

- Breathing difficulties
- Low blood sugar levels
- Jaundice (yellow/orange coloured skin)
- Lethargy and poor feeding
- Abnormal temperature; too cold or too hot.

Your midwife will look for these signs and check other risks during labour and will assess your baby after birth. If concerned they will ask a paediatrician to also assess your baby.

What needs to be done if my baby is at risk or shows signs of an infection?

The paediatrician will carefully review the history of your pregnancy and labour with your midwife and will examine your baby looking for signs of infection.

They may ask for your baby to be brought for assessment to the neonatal unit which has specialist monitoring equipment. This does not necessarily mean your baby is more unwell.

Depending on how high we think the risk of infection is your baby may need to be observed regularly by a midwife for the first 24 hours of life or s/he may need further investigations including blood tests. If blood tests are performed, antibiotics may be started while we wait for the results.

What are the risks of antibiotic treatment?

We recommend a once daily antibiotic called Ceftriaxone to treat newborn babies who are well but have risk factors for infection and for babies with some signs of infection who are well enough to stay on the postnatal ward.

Ceftriaxone is considered very safe for newborn babies, even when mothers have an allergy to antibiotics including penicillin. It does not tend to cause any short or long term side effects in newborn babies and will not affect their immune system or ability to fight infections naturally. If your baby was born before 37 weeks or jaundiced and needing treatment, a different antibiotic may be used called Cefotaxime. This is very similar to Ceftriaxone but needs to be given twice a day.

Ceftriaxone does kill a wide range of both ‘good’ and ‘bad’ bacteria, so is only used for as short a time as possible. You can help your baby’s ‘good’ bacteria by breastfeeding during and after the antibiotic treatment. Supermarket or over-the-counter pro-biotic products should not be given.

Your baby will be given the antibiotic through a thin plastic tube called a cannula placed into a vein, as newborn babies do not absorb well antibiotics given by mouth. This is a routine procedure and you can be with your baby while it is done. It may cause your baby a small amount of pain or discomfort. Once in place, the cannula will be secured with a clear plastic dressing and should cause no further pain.

What could happen if my baby does not get treatment?

Not all babies at risk of infection will have an infection. Some of the signs may be from the baby adapting to life outside the womb, but without tests and a period of observation it is hard to tell if your baby has an infection or not.

Untreated infections can become much harder to treat by the time there are definite signs and babies can come to long term harm and need treatment for longer. Early treatment can prevent these long term effects most of the time.

The course of action we set out in this leaflet is in line with national and international recommendations on the treatment of suspected neonatal infection.

What will happen after antibiotics are started?

In most cases your baby will stay with you on the postnatal ward. The midwife will observe them regularly and take measurements of their heart rate, breathing and temperature.

During the first day the neonatal medical team will look at the blood test results to check if they suggest an infection.

Your baby will have a second dose of the antibiotic at 24 hours old. A repeat blood test (called CRP) will also be taken to look for any changes. This is important as in some babies the first test may not show an infection because of a delay in your baby's body's response to the infection.

If the blood tests and signs suggest a definite infection, further tests may be needed. Your baby will also need more than the two doses of antibiotics described above. The neonatal team will discuss this with you in detail.

If none of the blood tests and observations suggests your baby has an infection, s/he will be discharged home.

One of the tests we take is a blood culture. On very rare occasions this test may become positive for infection in your baby's bloodstream after 36 hours, even though other tests are negative. If this happens, we will contact you and you may need to come back to be re-admitted for your baby to have three to five more days of antibiotics.

What should I do once I go home?

Once discharged, your baby should be treated the same as any other baby.

However, if tests done during your pregnancy show you carry Group B Streptococcus (GBS) bacteria, there is still a small risk of the baby developing a late infection, even if they had antibiotics straight after birth. This is possible up to six weeks after birth.

Signs of infection in newborn babies can be hard to spot, but include

- changes in behaviour such as inconsolable crying
- your baby being listless or unusually floppy
- your baby having problems feeding or tolerating feeds
- your baby being unusually cold or hot even if the environment is not
- rapid breathing
- change in skin colour – including being pale or developing jaundice (yellow coloured skin).

You should carry on monitoring your baby at home for any of these signs and if you spot any, contact your midwife, GP or go to the emergency department (ED) in an emergency.

Your GP will receive a letter explaining why your baby needed antibiotics. Please remember to register your baby with your GP practice as soon as possible.

Useful sources of information

NHS Choices

www.nhs.uk/conditions/pregnancy-and-baby

The NHS choices website contains useful information about many aspects of pregnancy and looking after a newborn baby. Use your smartphone to scan the QR code (you may need to download a QR code scanning app) to go directly to the newborn infections page.

NICE

https://www.nice.org.uk/guidance/ng195

NICE (National Institute for Health and Care Excellence) gives detailed information about the neonatal early onset infection national guidelines. One of the options they recommend is the Kaiser Permanente Sepsis Risk Calculator (section 1.3.6):

https://neonatalsepsiscalculator.kaiserpermanente.org/

Contact us

If you have any questions or concerns about neonatal infections, please contact a member of the neonatal medical team on Gwillim ward.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.stgeorges.nhs.uk

Additional services

Patient Advice and Liaison Service (PALS)

PALS can offer you on-the-spot advice and information when you have comments or concerns about our services or the care you have received. You can visit the PALS office between 9.30am and 4.30pm, Monday to Friday in the main corridor between Grosvenor and Lanesborough wings (near the lift foyer).
Tel: 020 8725 2453 **Email:** pals@stgeorges.nhs.uk

NHS Choices

NHS Choices provides online information and guidance on all aspects of health and healthcare, to help you make decisions about your health.
Web: www.nhs.uk

NHS 111

You can call 111 when you need medical help fast but it's not a 999 emergency. NHS 111 is available 24 hours a day, 365 days a year. Calls are free from landlines and mobile phones. **Tel:** 111

AccessAble

You can download accessibility guides for all our services by searching 'St George's Hospital' on the AccessAble website (www.accessable.co.uk). The guides are designed to ensure everyone – including those with accessibility needs – can access our hospital and community sites with confidence.

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