

VIEWPOINT

Group B streptococcus infection in infants

Pregnant women in the UK are not routinely screened for group B streptococcus and incidence of infection is increasing, says *Dr Raj Thakkar*

A third of people may be found to have group B streptococcus (GBS) in their intestine, and a quarter of women have GBS in their vagina at any given time. Colonisation is intermittent and for most people, remains inconsequential.

In contrast, infection with GBS carries significant morbidity and mortality. Infection can occur in any age group, but infants up to three months of age are most susceptible and GBS is the most common cause of life-threatening infection in newborns.

In comparison with countries that screen for GBS in pregnant women, the UK incidence of GBS infection (early onset or EO type) is increasing and estimates vary from less than one per 1,000 to 3.6 per 1,000 livebirths.

Of the 230,000 babies born to GBS-positive mothers in the UK, without preventive medicine about 88,000 will be colonised, 700 will have severe infection and up to 100 will die. GBS can also cause stillbirth and premature labour.

Currently in the UK, with some preventive measures for GBS, 75 per cent of GBS infection in babies is EO GBS, defined as infection occurring within six days of life.

Symptoms

EO GBS is acquired through vertical transmission from a colonised mother. In this scenario, infants may present with grunting, respiratory distress, poor feeding, excess sleeping, irritability, hypoglycaemia, tachycardia, bradycardia and hypotension as a consequence of pneumonia, meningitis or sepsis.

EO GBS carries an 11 per cent mortality risk and children who survive are at risk of long-term complications.

In contrast, late onset (LO) GBS infection occurs seven or more days after birth and may be contracted through a variety of sources. LO GBS infection is rare beyond three



GBS is a recognised cause of preterm delivery, maternal infections, stillbirths and late miscarriages



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months of age. Five per cent of babies who develop LO GBS infection die, usually from meningitis or sepsis. About 50 per cent of meningitis survivors will have demonstrable neurological sequelae. Screening for GBS has not reduced the incidence of LO infection.

Risk factors for infants contracting EO GBS include:

- Previous baby with GBS infection
- GBS colonisation in current pregnancy
- GBS-positive urinary culture
- Preterm labour
- Premature rupture of membranes or maternal intrapartum fever

Prevention

A 60 per cent reduction in EO GBS infection may be achieved by offering intrapartum antibiotics to high-risk women without screening for colonisation, as advocated by the Royal College of Obstetricians and Gynaecologists (RCOG).

Despite this guidance, which is due for review, audit data published by RCOG has demonstrated that policy regarding GBS varies across the UK and some obstetric units do not have a GBS policy.

In addition, not all women who are identified as high-risk receive intrapartum antibiotics. Many women may only have

colonisation as a risk factor, so without active screening, a significant number of cases will not be identified. Given the increased incidence of GBS infection in the UK since 2003, despite RCOG guidelines to treat high-risk women, it is clear a change in policy is required.

There has been a significant reduction in the incidence of EO GBS infection in countries such as the US, Australia, New Zealand, Spain, France, Italy and Belgium, which all screen pregnant women for GBS at 35-37 weeks' gestation. By offering intrapartum antibiotics to pregnant women who are colonised with GBS, as well as those whose babies are at risk of infection, more than 90 per cent of GBS infections may be prevented.

Despite the current arguments for screening, NICE and the National Screening Committee have not endorsed a UK-wide GBS screening programme and cost-effectiveness has been cited as one of the reasons for this decision.

To complicate matters further, vaginal and rectal swabs cultured using standard plating methods available on the NHS only have about 50 per cent sensitivity to identify GBS.

There are private tests available by post, which use enriched culture medium (ECM). ECM techniques, which are considered gold standard, are highly sensitive and specific, and have an 87 per cent PPV and a 96 per cent negative predictive value for GBS colonisation.

Testing should take place between 35 and 37 weeks' gestation. Testing before then may miss subsequent colonisation, whereas testing beyond 37 weeks may not allow time to process the results before birth.

Raising awareness

Awareness of GBS among healthcare professionals and pregnant women in the UK is considered inadequate. Surveys have shown 90 per cent of women would pay for ECM GBS testing if they were aware of it. It is clear, given the increasing incidence of GBS infection in the UK, that urgent action is required. Details of these tests and a wealth of information for professionals and patients can be found at Group B Strep Support, www.gbss.org.uk.

● *Dr Thakkar is a GP in Wooburn Green, Buckinghamshire*

Resources

- Group B Strep Support, www.gbss.org.uk
- RCOG. Prevention of early onset neonatal group B streptococcal disease. Green top guideline 36, 2003