

New algorithms for doctors managing meningitis

National charity Meningitis Research Foundation (MRF) has re-launched its series of algorithms for the management of meningococcal disease and bacterial meningitis in children and young people.

The new protocols are aimed at doctors in emergency medicine, paediatrics, paediatric intensive care units, anaesthetics and general medicine in the UK.

The authors have updated the meningococcal disease algorithm to incorporate the NICE guideline, and have developed an accompanying algorithm *Management of bacterial meningitis in children and young people* based on the NICE guideline.

These are based on the most exhaustive review of all of the evidence. The algorithms also feature additional 'how to' detail, including drugs and dosages for intubation, administration of inotropes and managing raised intracranial pressure.

The algorithms have been written by members of the Guideline Development



Group for NICE Bacterial Meningitis and Meningococcal Septicaemia CG102, together with the authors of the original *Early management of meningococcal disease* St Mary's/MRF algorithm.

The algorithms are published by MRF as A2 posters or a leaflet, free of charge.

www.meningitis.org/healthprofessionals,
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CMACE report on the effects of maternal obesity published

Maternal obesity in the UK: findings from a national project presents the results of a three-year project on obesity in pregnancy. The project includes results from a national cohort study of 5,068 women with

maternal obesity who gave birth in the UK during March and April 2009.

The UK prevalence of women with BMI ≥ 35 who give birth $\geq 24+0$ weeks' gestation, is 4.99%, equating to approximately 38,478

maternities each year. The risk of complications and adverse pregnancy-related outcomes increases with increasing BMI and these babies have an increased risk of perinatal mortality.

There were 43 stillbirths in the cohort corresponding to a rate of 8.6 stillbirths per 1,000 births, compared to 3.9 per 1,000 total births in the general population. The stillbirth rate increased with increasing BMI.

Approximately 20% of singleton babies were large for gestational age (LGA), twice as high as expected in the general population of births. LGA babies were more common among each increasing BMI group, with one third of women with a BMI ≥ 50 having a LGA baby, compared to 16% born to women with a BMI 35-39.9.

Neonatal unit admissions (within 48 hours of birth) correlated directly with maternal BMI. Babies born to mothers with a BMI ≥ 50 were almost twice as likely to be admitted to the neonatal unit as babies born to mothers with a BMI 35-39.9, even after adjusting for maternal age, parity, maternal diabetes and gestation at delivery.

Copies of the full report can be found on the CMACE website www.cmace.org.uk

Breakthrough technique to map the brains of unborn babies

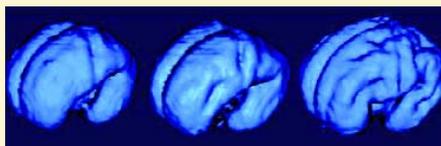
A team of expert researchers from London – funded by children's health charity Action Medical Research with support from WellChild charity for sick children – has started a project to develop a ground-breaking way of taking MRI scans during pregnancy.

MRI has the potential to identify brain damage in unborn babies, but movement of the baby during scanning seriously reduces image quality. Researchers are seeking to overcome the problems caused by movement to provide superior quality images and improve diagnosis.

If successful, the research would enable improved diagnosis of brain injuries and abnormalities in unborn babies. The research is being carried out at the Medical Research Council Clinical Sciences Centre in London, Hammersmith Hospital and Imperial College London.

Professor Mary Rutherford, who is leading the research, said: "The research team has recently developed a radical new way of using MRI to produce three-dimensional images of babies in the womb, even if the baby is moving around. The technique provides previously unobtainable measures of the sizes of different parts of the brain.

"Now, we are applying the new technique to a more sophisticated type of MRI scan, called diffusion tensor imaging, so that it too can be used during pregnancy. We believe diffusion tensor imaging will have the power to identify injuries and abnormalities in unborn babies' brains."



Fetal MRI reconstructions of folds of the brain surface at 24 (left) 27 (centre) and 30 (right) weeks' gestation.

Group B Strep charity urges test for all pregnant women

The charity Group B Strep Support is urging the Government to make sensitive testing for group B Streptococcus (GBS) available for all pregnant women, as recent research published in *BJOG: An International Journal of Obstetrics and Gynaecology*, December 2010 shows this would save money as well as babies' lives.

Only a handful of UK hospitals offer pregnant women the Enriched Culture Method (ECM) test that involves taking a rectal and vaginal swab at 35-37 weeks of pregnancy.

Current advice from the Royal College of Obstetricians & Gynaecologists is to give antibiotics in labour to 'high risk women'. However, figures from the Health Protection Agency show that between 2003 and 2008 the number of babies contracting GBS infection in the UK in the first 90 days of life rose by over 50%.

The research suggests that the NHS could make cost savings by introducing ECM testing for all pregnant women at 35-37 weeks and offering antibiotics in labour accordingly. It proposes that "screening based on culture at 35-37 weeks' gestation, with antibiotics given to all those women who deliver prior to 35 weeks becomes the most cost-effective option." It was calculated that the risk factor approach currently used in the UK costs £50,000 per infection prevented, but that this would fall to £45,000 if routine screening were introduced (screening is more efficient because it prevents more cases).

Combating hypothermia in developing countries

GE Healthcare has announced a global partnership with Embrace to distribute a low cost infant warmer that looks like a small sleeping bag and can help keep an infant warm for hours.

Embrace is a social enterprise founded by a team of engineers and MBAs from Stanford and Harvard University that aims to give every child an equal chance for a healthy life through an innovative, low cost infant warmer. The product will be launched in India in March 2011, and will subsequently scale globally. It aims to help the 20 million low birthweight and premature babies born every year around the world, primarily in developing countries, who are especially prone to hypothermia due to insufficient fat beneath the skin.

Detecting developmental dysplasia of the hips

The Newborn & Infant Physical Examination Programme recommends that all newborn babies should have a clinical examination of their hips followed by an ultrasound, if clinical examination suggests developmental dysplasia of the hips (DDH).

Universal ultrasound examination is not recommended, but selective ultrasound examination for babies with specific risk factors is. Irrespective of the clinical findings, an ultrasound examination of the hips should be performed if there is a family history of hip problems in early life or if the baby is a breech presentation.

For some other conditions, the evidence of a strong correlation with DDH is not as good but is suggestive. These include congenital talipes calcaneovalgus, metatarsus adductus, torticollis, oligohydramnios and a high female birthweight. For units currently using these as risk factors it is not suggested these should be abandoned. However, for all units the emphasis should be on the two main risk factors and others should only be introduced if there is the capacity to do so and to audit the outcome.

Responses from the NCT

CQC survey

The Care Quality Commission's survey of women's experiences of maternity services in 2010 has revealed the following:

- More than 1 in 5 women were left alone and worried at some time during labour.
- The number of women giving birth in stirrups, without clinical need, has gone up to nearly 1 in 6.
- 21% of mothers said they would like to see a midwife more often.
- Increased numbers of women are leaving hospital without the support they need to feed and care for their babies.

Belinda Phipps, NCT Chief Executive, said: "What is clear from this survey is that women's experiences are not improving overall. Practice is varied and the proposal for a national NHS commissioning board will help to reduce variation. The good news is that increased numbers of women felt they were treated with understanding.

"We now need to see the Government commit to the policy approach it set out in its Liberating the NHS papers, building on improvements in maternity care, with an increased focus on postnatal services."

BPA ban

The NCT is pleased that The European Commission has announced a ban on the use of bisphenol-A (BPA) plastics in baby bottles.

Belinda Phipps said: "We have been calling for a UK ban on selling baby bottles containing BPA plastics for several years.

"There are now viable alternatives to BPA that can be used to produce clear plastic baby bottles, and so there is no reason to continue using this chemical. We would like to see BPA plastics banned in other products, as the chemical is also used in the linings of some formula tins and baby food containers."

