Newborn and Infant Physical Examination Programme launches e-learning module

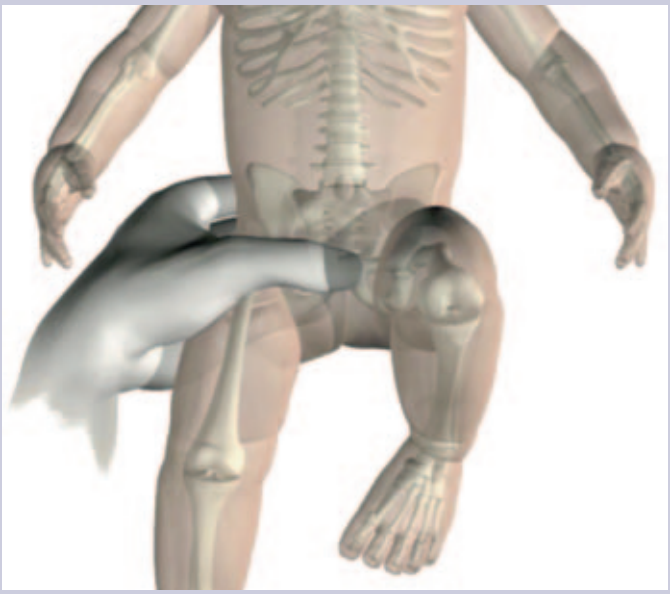
Some infants with certain congenital conditions are diagnosed late, even though early diagnosis reduces the likelihood of morbidity and mortality as well as the associated severe treatment options and the risk of long-term disability.

The NHS Newborn and Infant Physical Examination Programme (NIPE) offer parents of newborn babies in England the opportunity to have a head-to-toe physical examination for their baby to check for problems or abnormalities. The examination is carried out within 72 hours of birth and then again at 6-8 weeks of age, as some conditions can develop or become apparent later. It includes a general all over physical check, as well as specific examination of the infant's eyes, heart, hips and testes.

To support practitioners, NIPE has launched a state-of-the-art, e-learning module that uses film clips and animations to illustrate best practice and covers the four screening aspects of the examination. It is free, quick-to-register and easy-to-use, offering condensed or full versions.

During the pilot phase, many users described the resource as an excellent refresher for seasoned practitioners and an essential learning resource for anyone new to the programme. In particular, practitioners appreciated the detailed animation of the Ortolani and Barlow manoeuvres to examine infant hips.

Dr Simon Mitchell, Consultant Neonatologist and Honorary Professor at the University of Salford says: "There has been a real need to improve training for the physical examination and having used this new e-module I rate it extremely highly. Doctors will be more confident to deliver the examination having used it and the quality of the whole service, as well as the experience of parents, will improve."



The NIPE e-learning module includes an animation of the Ortolani and Barlow manoeuvres to examine an infant's hips.

It is recommended that anyone who undertakes the NIPE examination uses the e-learning resource to update their own knowledge and skills (www.newbornphysical.screening.nhs.uk/elearning). The resource, which will be regularly reviewed in light of changes in policy and user feedback, forms part of a suite of antenatal and newborn screening education resources produced by the UK National Screening Committee (UKNSC).

Stillbirth risk is higher in women with pregnancy-related liver disease

Research funded by Sands, the stillbirth and neonatal death charity, and managed by Wellbeing of Women, has shown a three-fold increase in the risk of stillbirth for women with severe intrahepatic cholestasis of pregnancy (ICP).

ICP, also known as obstetric cholestasis, is a pregnancy-specific liver disease that occurs in one in 200 pregnancies and affects around 5,000 women each year in the UK.

The study, published online in *Hepatology*[1], was undertaken by Professor Catherine Williamson and Dr Victoria Geenes, at the Institute of Reproductive and Developmental Biology, Imperial College London and the Women's Health Academic Centre, King's College London. The findings may have implications for current management guidelines of pregnancies with severe ICP.

Reference

1. **Geenes V., Chappell L., Seed P. et al.** Association of severe intrahepatic cholestasis of pregnancy with adverse pregnancy outcomes: A prospective population-based case-control study. *Hepatology* 2013: doi:10.1002/hep.26617.

Detecting autism in babies

Using eye-tracking technology, researchers claim to have identified subtle differences in the way infants with autistic spectrum disorder (ASD) respond to visual prompts.

A small cohort study published in *Nature*[1] and carried out by Warren Jones and Ami Klin from Emory University School of Medicine, Atlanta USA, followed infants from two months to 24 months of age. The researchers wanted to see whether reduced eye contact, which can be a feature of ASD, was present before obvious symptoms of ASD. It was found that infants, who were subsequently confirmed as having ASD, had more limited eye contact than their peers.

The researchers found that eye fixation ability was unaffected at two months of age but declined by six months, suggesting that infants who develop ASD may not exhibit reduced eye contact from birth. This may contradict prior theories that children with ASD are born with poor social skills.

Reference

1. **Jones W., Klin A.** Attention to eyes is present but in decline in 2-6-month-old infants later diagnosed with autism. *Nature* 2013;504:427-31.

Predicting developmental delay in preterm infants

Researchers have identified a potential biomarker for predicting whether a premature infant is at high risk for neurodevelopmental problems, according to a study published in the online journal *Radiology*[1].

Dr Giles Kendall, Consultant Neonatologist at University College London Hospitals NHS Foundation Trust and Honorary Senior Lecturer of Neonatal Neuroimaging and Neuroprotection at University College London, and his research team performed imaging studies on the brains of preterm infants, at their term-equivalent age. One year later, the infants were evaluated for fine motor, gross motor and communication abilities.

Analysis of brain chemical ratios enabled the team to predict with 70% certainty which babies were at high risk for motor development problems. Dr Kendall commented that a tool to predict the likelihood of a premature baby having neurodevelopmental problems is useful for determining which infants should receive intensive interventions.

Reference

1. **Kendall G.S., Melbourne A., Johnson S. et al.** White matter NAA/Cho and Cho/Cr ratios at MR spectroscopy are predictive of motor outcome in preterm infants. *Radiology* 2013 DOI: http://dx.doi.org/10.1148/radiol.13122679.

New scanning techniques may aid diagnosis of urinary tract obstruction

Lower urinary tract obstruction (LUTO) is a prenatal condition associated with severe complications that often lead to infant mortality.

Primarily affecting males, LUTO often proves difficult to diagnose. Researchers working on better ways to detect LUTO *in utero* and gain a clearer understanding of its causes have described the use of two forms of imaging – optical projection tomography and contrast-enhanced microCT scanning – in an article published in *Pediatric and Developmental Pathology*[1].

The use of both scanning techniques on autopsy specimens allowed the researchers to gain a clearer image of the lower urinary tract than previous techniques, and the blockages that caused fetal mortality were clearer than on a regular fetal ultrasound performed *in utero*.

The researchers hope that as the technology evolves, the approach may be moved to the clinical arena and aid physicians to identify LUTO quickly, eventually contributing to prevention of the disease.

Reference

1. **Siebert J.R., Smith K.J., Cox L.L. et al.** Microtomographic analysis of lower urinary tract obstruction. *Pediatr Dev Pathol* 2013;16:405-14.

Emily Newton was diagnosed with GBS shortly after her birth – fortunately she survived the preventable infection.

Enhanced test for GBS cancelled

The Department of Health has made a last minute decision to cancel access to an improved Group B Streptococcus (GBS) test, just days ahead of the scheduled start date.

GBS is the UK's most common cause of life-threatening infection in newborn babies and can be passed from mother to infant during pregnancy, yet the infection is up to 90% preventable when antibiotics are given to women found to be carriers. The simple, GBS-specific test, which was going to be introduced from 1 January 2014, could help prevent death and disability in newborn infants.

The charity Group B Strep Support (GBSS), which campaigns for information and routine antenatal testing for GBS to be made freely available on the NHS, is shocked by the decision not to allow doctors to request specific testing for at-risk pregnant women.