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## Editorial

# Screening for Hip Instability in Neonates and Infants

E H Lee

Recent studies have shown a significant incidence of congenital dislocation of the hip in Singapore. In the past, the incidence in Singapore and Malaysia was reported as extremely low compared to the incidence in the West<sup>(1)</sup>. A recent comprehensive neonatal hip screening programme at the National University Hospital revealed an incidence of 4.7 per 1,000 live births, which is comparable to figures published in the United Kingdom and Australia<sup>(2,3)</sup>. It is important that hip dislocations are not missed in neonates and infants because early treatment in an abduction splint is simple, well-tolerated and effective. Treatment in the older child is more difficult and often may not prevent the late sequelae of painful osteoarthritis of the hip in adulthood.

In recent years, there has been a move to change the term congenital dislocation of the hip (CDH) to developmental dysplasia of the hip (DDH) by the American Academy of Paediatricians. This is because the term CDH implies that the dislocation is present at birth and therefore should be detected at birth. However, there are some cases in which the dislocation can present later. Also, not all the cases are dislocations. There is a spectrum of the condition from dysplasia to subluxation to dislocation. The terminology has been adopted by the Paediatric Orthopaedic Society of North America and is currently in use. It is important to qualify the term DDH by adding "dysplasia", "subluxated", "dislocatable" and "dislocated" (eg. DDH – dislocatable).

The screening of the neonate for hip instability should be performed carefully by a trained examiner who should be able to detect subtle differences in instability. Undue force should not be used as a normal hip can be dislocated. Hip clicks are often detected during neonatal screening. Most of these clicks disappear on subsequent examinations and are benign. Some clicks originate from the knee. Persistent hip clicks have been shown to be associated with acetabular dysplasia<sup>(4)</sup>. Babies with persistent hip clicks should be followed-up and treated with an abduction splint if the dysplasia persists to prevent possible subsequent

subluxation and late onset of osteoarthritis. Babies found to have instability are usually prescribed an abduction splint which is worn until the hip stabilises and the radiological examinations are normal. This involves three months of full-time bracing and another six weeks to three months of night-time bracing.

In recent years, ultrasonography has become an important tool in the management of DDH. It is used not only in the diagnosis but also in the assessment of stability and adequacy of reduction of the hip. It is also used in the screening of "high risk" hips in children with a family history of hip dislocations. The routine use of ultrasound for screening of all newborns however is not practised as it is too time-consuming and not cost-effective. Ultrasonography is especially useful in the first three months of life but may be used up to one year. X-rays are generally not useful in the first three months as the pelvis and hips are mostly cartilaginous. However after the age of three months, X-rays are useful to detect not only dislocation but also subluxation and dysplasia.

With good neonatal screening and an awareness that DDH is not as uncommon as we thought, disabling hip osteoarthritis in adulthood can be prevented in most of our female population.

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