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Editorial

NEONATAL DETECTION OF DEVELOPMENTAL DYSPLASIA OF THE HIP (DDH)

David Jones

Thirty years after the introduction of a national screening programme for congenital dislocation of the hip (CDH)¹ and 12 years after the publication of guidelines,² neonatal clinical examination is failing in its objectives and we are uncertain as to how best to proceed.

The spectrum of presentation of what is now termed developmental dysplasia of the hip (DDH) is wide. It includes neonatal instability, an infant with limited abduction, a limping toddler, a child or adolescent with painful dysplasia and an adult with osteoarthritis. There is general agreement that the earlier the diagnosis the better the outcome and that neonatal examination has been a cornerstone of our management of DDH.

The initial optimism, however, that early clinical examination would eliminate late presentation after three months has long since faded.³⁻⁷ Over the years, a list of failures of the technique has steadily accumulated.⁸⁻¹⁵ In particular, the experience of the Malmö group is sobering.⁸ In the hands of these pioneers of clinical screening the incidence of later presentation has risen.

Nevertheless, there is evidence that well-conducted neonatal clinical examination can favourably influence rates of late presentation, especially when performed by expert examiners.^{9,16-18}

Ultimately, however, we have a clinical test which has a high specificity (100%) because there are no false-positive results, but a low sensitivity, probably less than 60%.^{9,19} This is why we need to continue surveillance throughout infancy.

Ultrasound examination either by static or dynamic means is now well established and its role and influence have spread widely.²⁰⁻²⁵ It offers specificity and sensitivity in excess of 90%,¹⁹ but it is not infallible. The images can be difficult to interpret, it overdiagnoses the condition, it does not tell us whom to treat and it poses logistical problems in organisation. Opinion is divided among those supporting universal screening as being effective^{23,26} and those favouring selective use when there is clinical suspicion or in babies at risk because of family history, a foot deformity, breech presentation or torticollis.^{27,28} Others are firmly against universal screening by ultrasound.²⁹⁻³¹

Universal ultrasound examination requires a national policy with guidelines, the establishment of centres to train screeners and interpreters, agreement on whom should be treated and a long-term outcome study. If a selective policy is adopted we must accept that there will continue to be children who are diagnosed late.³²

This year the Medical Research Council (MRC) Report on Congenital Dislocation of the Hip³³ concluded that neonatal clinical examination had not reduced the incidence of late presentation requiring a surgical procedure, defined as one requiring a general anaesthetic, including an arthrogram or application of a cast, not necessarily a major open operation. It stated that the scientific basis for the screening programme was weak and advised a formal evaluation of current and alternative policies, including

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universal primary ultrasound imaging.

The Report was followed by a statement in the *British Medical Journal* that clinical screening was not effective and asked if it was justified.³⁴ Unfortunately, examiners may be inexperienced and poorly taught. The condition is relatively rare for the individual doctor who is also faced with other problems as part of multiphasic screening. This emphasises the need for orthopaedic surgeons to be active in screening. Our performance as teachers or leaders in such programmes is patchy.³⁵

While acknowledging the conclusions of the MRC Report we must be strongly represented in the wider debate. DDH is a disabling condition and we must stress the importance and value of early diagnosis.^{16-19,25,36} We should not allow confusion at the neonatal stage to divert attention from continuing vigilance during infancy for risk factors and later signs of abnormality, especially limited abduction and limb asymmetry. Primary health-care teams must therefore be supported and encouraged.

We should consider a change of terminology. Just as we prefer the term DDH to CDH because it better describes the condition, it would be more appropriate to use the word 'surveillance' rather than 'screening' when discussing diagnosis. The early detection of DDH does not fulfil the criteria of a screening technique.^{37,38} Although the condition is recognised as an important problem we do not understand the natural history, we do not have a test of sufficient specificity and sensitivity, simple to apply and interpret and agreed by all, we do not have universal agreement on early treatment and the economic consequences are not fully appreciated.³⁹

DDH remains mysterious, protean and unsolved. It is poorly understood by those who are largely responsible for detecting it. Current methods of surveillance are fallible and this must be understood in the clinical and medico-legal arenas. In spite of intense dedication over the years and an awesome literature on the subject we have not yet reached a position where we can confidently agree on an acceptable standard of practice. We need a reasoned appraisal of the various methods of surveillance which are available so that a common view can be agreed for the management of this condition.

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