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Report recommends changes in screening for developmental dysplasia of the hip

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A new AAP clinical report on the evaluation and referral for developmental dysplasia of the hip (DDH) in infants includes important recommended changes in DDH surveillance for the pediatrician related to risk factors that may prompt an imaging study. It also encourages hip-healthy methods of swaddling.

However, most of the guidance remains unchanged from a 2000 clinical practice guideline.

Evaluation and Referral for Developmental Dysplasia of the Hip in Infants, from the AAP Section on Orthopaedics, is available at http://dx.doi.org/10.1542/peds.2016-3107 and will be published in the December issue of *Pediatrics*.

Latest guidance

New guidance on developmental dysplasia of the hip covers changes in risk factors that might prompt an imaging study.

DDH screening, better termed surveillance, is recommended by all leading U.S. and Canadian pediatric and orthopedic physician organizations, despite an "inconclusive" rating by the U.S. Preventive Services Task Force. The purpose of surveillance is to allow early detection of *significant* hip dysplasia, which in turn permits early intervention and possible avoidance of surgery or future disability. While the report recognizes many controversies regarding diagnosis and treatment of DDH, it incorporates the latest clinical research and guidance from the American Academy of Orthopaedic Surgeons, and makes the following *new* recommendations:

- If parents choose to swaddle their infants, encourage hip-healthy swaddling that allows freedom of hip motion and avoids forced position of hip extension and adduction (see http://bit.ly/2fh8gZ8).
- Risk factors for which the pediatrician *may* wish to consider an imaging study in the child with a normal screening physical examination are:
- breech position in the third trimester - *both* males and females;
- family history of DDH;
- history of improper swaddling; and

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- history of abnormal hip physical examination in the neonatal period, which subsequently normalizes.

Periodic hip examination crucial

The report reinforces the earlier advice to carefully perform and document the periodic hip examination until the child is walking. This exam should include the Ortolani test (see resources), hip abduction, gluteal or major thigh crease asymmetry (low specificity) and leg length inequality (Galeazzi sign). The importance of the periodic exam cannot be overemphasized because other than female gender, most children with DDH do not have risk factors. In other words, risk factors are poor indicators of DDH, and all children need to undergo periodic hip examination until they begin walking.

The report confirmed that no screening method completely eliminates the risk of late presentation of DDH.

Use of imaging

When an imaging study is indicated, whether by risk factors or by suspicious physical examination, it is best to defer diagnostic hip ultrasound until age 6 weeks (adjust for prematurity) or plain anteroposterior pelvis radiograph at ages 4-6 months. Ultrasonography may be done earlier in guiding *treatment* of an Ortolani-positive hip. Initial diagnostic ultrasound usually is deferred until after age 6 weeks because of the high rate of false positives or immature hips, which spontaneously resolve most often by age 6 weeks.

In using imaging for assessment of babies with one or more risk factors but negative physical exam, there is no proven benefit to ultrasound at 6 weeks vs. radiograph at 4-6 months; the report recommends choosing based on local conditions and availability of experienced, trained pediatric hip sonographers.

Regarding breech position in the third trimester as a risk factor, the term breech is used broadly: It doesn't matter if the child is delivered breech, turns or is turned.

When considering family history as a risk factor, the term again is used broadly without specificity. Clinicians may include early (age younger than 40 years) hip replacement for dysplasia in a close relative.

Finally, there is sensitivity to the medicolegal concerns of AAP members. This report provides only guidance; there is no DDH screening method that completely eliminates late presenting DDH or mild degrees of dysplasia. When in doubt, it's best to make a referral and listen carefully to any parental concerns.

Drs. Shaw and Segal are lead authors of the clinical report and members of the AAP Section on Orthopaedics Executive Committee.

Resources

- A link to a video showing how to perform the Barlow and Ortolani maneuvers is on the AAP Section on Orthopaedics website.
- International Hip Dysplasia Institute