Developmental Dysplasia of the Hip in Infants: A Clinical Report from the AAP on Evaluation and Referral

Key Points for Practice

- The AAP recommends against universally screening for DDH with ultrasonography.
- Imaging can be performed in infants considered high risk from six weeks to six months of age who have normal findings on physical examination.
- Radiography can be an option for children older than four months who have normal findings on physical examination.
- A child's legs should not be tightly swaddled with the hips extended and adducted.

From the *AFP* Editors

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Developmental dysplasia of the hip (DDH) can range from a mild abnormality to dislocation. In infants and young children, it is asymptomatic; therefore, screening is required to diagnose it in otherwise healthy children. There are no agreed upon best screening techniques and important clinical findings because of a lack of quality evidence. In addition, there is no standardized definition of DDH, including what measurable criteria at what age can be considered differences in development and what indicates DDH.

It should be noted that, although there are different definitions of DDH, there is still an overall consensus from expert groups that prognosis is poor for hips that remain unstable or abnormal until two to three years of age. The American Academy of Pediatrics (AAP) has published this clinical report to provide updated information since the release of their practice guideline in 2000. The AAP indicates that screening for DDH is useful to prevent subluxated or dislocated hips in the first year of an infant's life. It should be noted that no method of screening has been determined to entirely remove the risk of DDH occurring late, and no high-quality evidence supports the idea that screening combined with early treatment will prevent mild DDH.

Physical Examination

DDH is most often diagnosed in children without risk factors; therefore, physical examination is the main screening method. Using occasional physical examination, physicians should aim to diagnose hip subluxation or dislocation by six months of age. Many expert groups recommend physical examination in newborns and occasionally thereafter to identify differences in limb length, uneven thigh or buttock creases, and restricted abduction. The examination should include the Ortolani test (hip dislocation) to evaluate stability. Electronic health records can be helpful in this regard, to remind clinicians to perform examinations and document results.

Referral to an orthopedist is based primarily on findings of instability or dislocation on examination and, in children four weeks or younger, restricted or uneven hip abduction. If a physician or caregivers are worried, there are risk factors for DDH present, or an examination is inconclusive, referral can also be considered.

Imaging

Imaging with ultrasonography is an option in infants younger than six months with suspicious or inconclusive findings on physical examination. The AAP recommends against universally screening for DDH with ultrasonography; however, it can be selectively performed in infants six weeks to six months of age who have normal findings on physical examination, but are considered high risk: breech presentation in the third trimester; family history of DDH or a personal history of instability; history of incorrect tight lower extremity swaddling; or whose caregivers are anxious. However, ultrasonography or radiography does not have to be performed to refer an infant or child to an orthopedist for

DDH. Selective imaging may be performed with consultation from a pediatric radiologist or orthopedist.

Ultrasonography should be performed and the results assessed by trained experts; guidelines from the American Institute of Ultrasound in Medicine and the American College of Radiology should be followed. Because imaging quality can vary by location, it would be helpful to create imaging and referral standards locally to encourage more consistent treatment. It should be noted that minor hip abnormalities visible on ultrasonography in infants six weeks to four months of age typically will resolve over time.

Radiography with anteroposterior and frog pelvis views can be an option for children older than four months who have normal findings on physical examination, but who are considered high risk, and for children of any age with positive findings. For children four to six months of age, radiography or ultrasonography can be used, taking into account the better availability, lower false-positive rate, and lower cost with radiography vs. its low radiation dose.

Treatment

DDH does not need to be emergently treated, nor does bracing need to be started in the hospital. An orthopedist can be consulted within a few weeks of a positive result on the Ortolani test. For those with a positive result on the Barlow test, reexamination is indicated; however, if instability does not resolve, the patient can be referred to an orthopedist.

A child's legs should not be tightly swaddled with the hips extended and adducted. To decrease the risk of DDH, safe swaddling techniques that do not restrict hip movement should be used instead.

There are not data to recommend treatment instead of observation in infants six weeks to four months of age with minor hip abnormalities on ultrasonography; care should instead be individualized to the patient through shared decision making. Data do strongly indicate a need to treat children with hip dislocations, but to observe those with mild DDH and instability. Although observation, examinations, and imaging can be managed by a family physician or orthopedist, treatment should be managed by the orthopedist.

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