

Developmental Hip Dysplasia

Nicole A. Kelly, MD

UCI-CHOC Pediatrics, PGY1

Incidence & Course

- 1 in 1000 births have hip dislocation, more with hip subluxation/laxity
- Mild dysplasia often resolves in the first few weeks on its own
- Those with true dislocation or severe dysplasia of the hip joint can develop:
 - limp
 - leg-length discrepancy
 - limited abduction of the hip
 - premature arthritis

It's About Anatomy!

The femoral head and acetabulum have to fit well into each other to develop into a healthy hip.

If one is not well formed, neither will develop correctly.



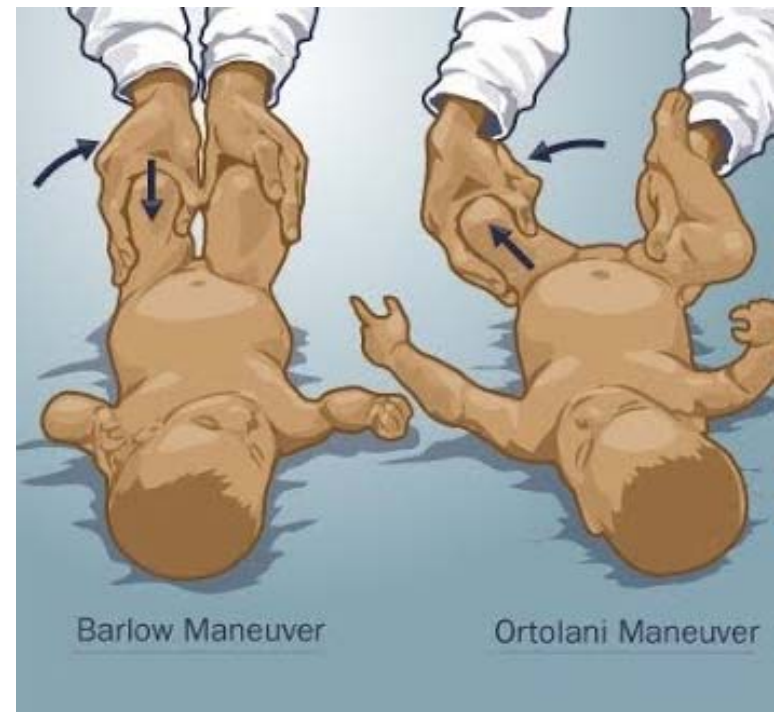
Risk Factors

- Breech presentation in the third trimester (regardless of Cesarean v. vaginal delivery)
- Family history
 - Those with positive family history in 1st degree relative are at 12x the risk
- Female sex
- Incorrect lower extremity swaddling

Screening

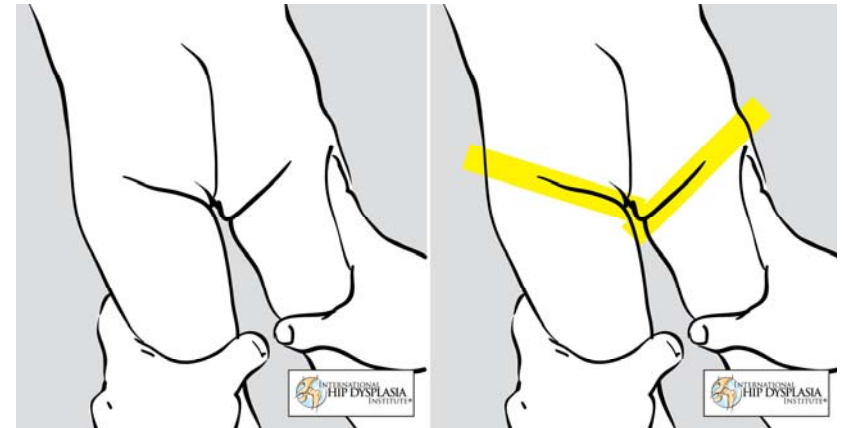
- Perform maneuver with each physical exam until 6-9 months of age
- Become less relevant at 3 months of age
- *Elicited dislocation* = positive test
- Hip clicks are clinically insignificant
- **Ortolani** >> Barlow

Those with positive Barlow usually resolve spontaneously



Physical Exam Findings

- Asymmetric knee height (Galeazzi)
- Asymmetric thigh or gluteal folds
- Asymmetric/ limited abduction of the hips
- Leg-length discrepancy
- Limp



Hip US

- Dynamic hip US preferred *
- Most accurate from 6 weeks of age to 4-6 months
- Indications: abnormal exam findings that persist after 3-4 weeks OR high risk patient with normal exam

High risk patient: Breech presentation in 3rd trimester (regardless of method of delivery), positive family history, history of previous clinical instability, history of improper swaddling

Alternative Imaging: AP XR of the pelvis at 4-6 months

When Do I Refer?

- Unstable hip = dislocation with Ortolani maneuver
- Abnormal imaging
- Asymmetric or limited hip abduction after 4 weeks of age
- High-risk patient with questionable exam
- Parental concern



Treatment

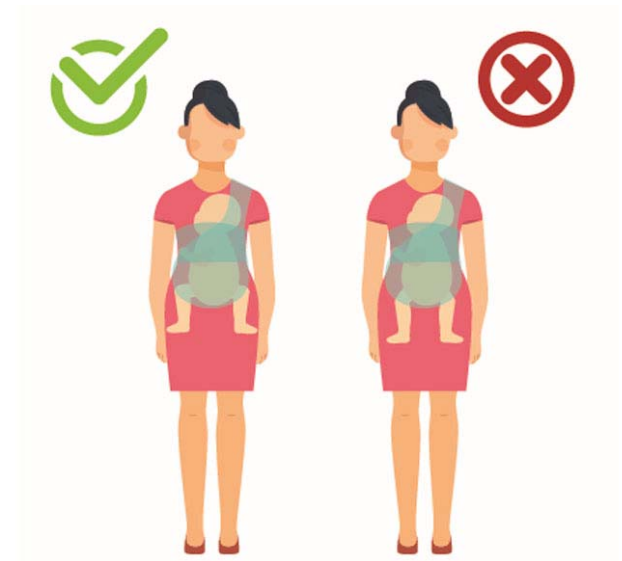
- Abnormal imaging and normal exam – monitor closely without harness (*possible false positive imaging*)
- Abnormal imaging and abnormal exam – Pavlik Harness
- Older infants may need more extensive treatment – closed reduction with adductor tenotomy and spica cast
- Surgery is recommended for children >18 months or those who failed to improve with harnessing
- *Risks of harnessing: avascular necrosis, femoral nerve palsy, inferior hip dislocation*



Pavlik Harness

Prevention: Safe Positioning!

- Only the top of the swaddle should be tight! Legs should be free to move.
- In a baby carrier, maintain hip flexion and abduction instead of extension and adduction.



Resource

Shaw, Brian and Segal, Lee. "Evaluation and Referral of Developmental Dysplasia of the Hips in Infants". *Pediatrics*. Volume 38. December 2016.