NCCU CLINICAL GUIDELINES
SECTION: 19

TRANSFER AND DISCHARGE

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Developmental dysplasia of the hips (DDH)
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DEVELOPMENTAL DYSPLASIA OF THE HIPS (DDH)

An abnormality that affects the hip joint by which the femoral head has an abnormal relationship to the acetabulum. The range of defects seen include:

- Dislocation
- Subluxation
- Instability
- X-ray abnormalities with abnormal acetabula

In the immediate newborn period hip capsule laxity predominates and the femoral head may spontaneously dislocate and relocate. If it stabilises within a few days, hip development is normal. If dislocation/subluxation persists this leads to structural anatomical changes. Incidence of DDH in Western Australia is approximately 6/1000 births. Girls more than boys, left hip more than right, and maybe bilateral.

INFANTS AT INCREASED RISK OF DDH

1. Female breech position
2. Positive family history of DDH (1st degree relative)
3. Abnormal hip examination

However, >60% infants have no identifiable risk factors. It is recommended that all infants are screened for DDH by serial clinical examinations until walking. The earlier the diagnosis is made, the more effective the treatment. In the newborn, the hips are tested using the Ortolani and Barlow Tests – a positive examination means DDH. Refer to SR/Consultant for verification then referral to orthopaedic clinic.

CLINICAL EXAMINATION / SIGNS

These tests have a high specificity (0.98-0.99) for diagnosis of hip dislocation or subluxation. Sensitivity varies with skill of examiner.

Barlow test – provocation test for dislocability. Pelvis steadied with one hand. The other hand is on hip to be tested with the thumb over lesser trochanter and middle finger tip over greater trochanter. With the hip and knee flexed gentle pressure exerted over lesser trochanter in a posteriolateral direction as the hip is adducted. A palpable clunk or sensation of movement is felt as the femoral head exits the acetabulum posteriorally.

Ortolani test – reduces a recently dislocated hip. It is performed concomitantly with the Barlow Test. With hip flexed, the femur is abducted and femoral head lifted anteriorally into the acetabulum – if reduction occurs, again a palpable clunk.

DIAGNOSIS

No gold standard for diagnosis during the newborn period. Not always present and not always detectable at birth. However the earlier a dislocated hip is detected the simpler and more effective treatment is. Objective of screening is to reduce the number diagnosed later in infancy and childhood.
All newborns will have their hips examined at their first day check and at their discharge check. Also look for:

- Asymmetrical thigh or gluteal folds.
- Apparent leg length difference.
- Restricted motion at hip (supine: stabilised pelvis abduct to 75 and adduct to 30).
- Clicking sensation on moving hip. Palpable sharp 'clicks' are seldom pathological and are not predictive of DDH.
- Feeling of looseness without dislocation (subluxation).

ULTRASOUND

Ultrasound is not the examination of choice as a screening procedure but is an adjunct to the clinical evaluation. It is an accurate method for hip visualisation. It is used for observation and treatment of DDH. It can clarify clinical examination in some instances. During the first 4 weeks it often reveals minor instability and acetabular immaturity. Nearly all of these are not apparent clinically and resolve spontaneously. With screening ultrasound identifies more infants as having DDH than serial clinical examinations. There has been an increase in false positives (therefore unnecessary labelling in some treatment) without a decrease in late DDH or operative treatment. Risk of late DDH is 1 in 5000 at 18 months.