

Hip Dysplasia

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Overview

Hip dysplasia describes a condition where the hip's ball (femoral head) and socket (acetabulum) are misaligned. The condition primarily affects children but is also commonly diagnosed in adulthood. Treatment options range from simple bracing to extensive surgery and should be determined based on the patient's age and the severity of their condition.

Description

Hip dysplasia occurs as a result of developmental problems in the hip joint. The condition occurs when the femoral head partially or completely slips out of the hip socket causing dislocation of the hip joint.

Severity of the condition ranges from a mild shallowness of the cup (acetabulum), to a partial dislocation called subluxation, to a complete dislocation where the ball has no contact with the socket and may include a misshapen or malformed femoral head.

Symptoms

Hip dysplasia ranges from mild to severe and can affect one or both hips. It is more common in girls and usually affects the left hip. Dislocations in some infants may not cause pain until the child begins to walk and mild shallowness of the acetabulum may not cause pain until the teen years or later.

Common symptoms of hip dysplasia include:

- Abnormal positioning or turning of the legs
- Decreased range of motion on the side where the hip is dislocated
- The leg may appear shorter on the side where hip is dislocated
- Skin folds on the thigh or buttocks may appear uneven
- A limp if one hip joint is affected or waddle if both hip joints are affected. However, an abnormal gait might be difficult to detect if both hips are dislocated.
- Undiagnosed hip dysplasia may result in osteoarthritis

Cause

The exact cause of hip dysplasia is unknown but several factors are believed to play a contributing role:

- Abnormal position of the femoral head
- A shallow or abnormally shaped acetabulum
- Laxity or looseness of the ligaments around the joint
- Large fetal size, narrow uterus, and/or breech position of the fetus leading to abnormal stress on the hip joint
- Improper swaddling or overly restrictive baby seats and carriers where an infant's legs are abnormally positioned

Diagnosis

Newborn exams should include screening for early detection of hip dysplasia. This is especially important if the baby is born by breech or has a family history of hip dysplasia.

Physical maneuvers and tests involving the hips, legs, and knees are used to detect instability, limited range of motion, and skin unevenness in the hips. Ultrasounds, x-rays and MRI scans may be ordered to confirm the diagnosis. Treatment should begin immediately if the child is found to have hip dysplasia.

TREATMENT

Treatment for hip dysplasia depends on both the age of the patient and severity of the condition. The aim of treatment is to keep the femoral head in good contact with the acetabulum.

A brace or harness can often be sufficient if the condition is detected within six weeks of birth. If the problem persists, casting may be advised to keep the hip in flexion and abduction.

Surgery should only be advised after all conventional non-surgical treatments have proven ineffective.

Non-Surgical Treatment

Pavlik Harnesses, van Rosen Splints and abduction braces are utilized for infants to reduce dislocated hips, maintain reduction of a previously dislocated hip, or to encourage the hip socket to deepen and conform around the ball of the femoral head. When applied and utilized correctly, these devices can be effective in over 90% of cases, allowing most patients to avoid surgery.

**Surgical Treatment
Options for Moderate Hip
Dysplasia By Age**

2 months – 18 months

- Placement of the ball in the socket without any incisions (closed reduction) and a body cast
- A small tendon release in the groin and casting
- Opening of the joint from inside the groin (medial open reduction)
- Opening of the joint from the front (anterior open reduction)

18 months to 6 years

- Anterior open reduction with or without deepening of the socket (Innonimate Salter or Dega Osteotomy)
- Shortening or redirecting the femur (femoral osteotomy or shortening)

6 years +

- Past the age of six, treatment is usually for shallow or misaligned hips, not dislocated hips. The goal of treatment is often to deepen the socket or realign the femur.

15+ in boys & 13+ in girls (Skeletal Maturity)

Periacetabular osteotomies are the most common method for deepening the socket of patients in this age range. An osteotomy is a surgical procedure where the hip socket is freed and reset. Screws are utilized to hold the socket in the correct position and proper alignment. In a Ganz (periacetabular) osteotomy, the acetabulum is surgically separated from the rest of the pelvis and moved into the proper position over the femoral head. Over the last 18 years and hundreds of hips, we have had outstanding results in utilizing this procedure for teenagers and adults with acetabular dysplasia.

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