

## **Osteochondral Allograft Transplantation and Periacetabular Osteotomy for Residual Deformities of Legg-Calvé-Perthes Disease**

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Legg-Calvé-Perthes disease is a pathologic entity consisting of idiopathic osteonecrosis of the proximal femoral epiphysis. Legg-Calvé-Perthes disease primarily affects the lateral and anterior part of the femoral head, causing flattening and bulging over time, which may lead to remodeling of the acetabulum. Although Legg-Calvé-Perthes disease occurs in children and typically is self-limiting, residual deformities may persist into adulthood and have been linked to several factors, including the amount of the epiphysis affected, age at onset, persistent lateral acetabular deficiency, premature physeal arrest causing leg-length discrepancy, and adequacy of management.

Persistent deformities may lead to pain in adulthood because of anterior femoroacetabular impingement and hinged hip flexion and abduction. Residual joint incongruence may predispose patients to early osteoarthritis. Several treatment options are available to manage these sequelae, with the goal of postponing joint replacement, including femoral osteochondroplasty, various femoral and acetabular osteotomies, labral repair or reconstruction, and osteochondral allograft procedures.

Surgical management is guided by the cause of symptoms. Patients with isolated femoroacetabular impingement must be differentiated from those with concurrent acetabular dysplasia and instability. In addition, surgeons must identify whether impingement arises from an intra-articular source or an extra-articular source, such as trochanteric overgrowth or a short femoral neck. Often, patients require correction of deformities on the femoral and acetabular side.

This video discusses the case presentation of a young adult with Legg-Calvé-Perthes disease who had progressive symptoms secondary to cam-type femoroacetabular impingement with osteochondral dissecans and acetabular dysplasia. The patient underwent combined surgical hip dislocation and a periacetabular osteotomy with osteochondral femoral head allograft.