

ADOLESCENT ANTERIOR CRUCIATE LIGAMENT RECONSTRUCTION OF THE KNEE - PROBLEMS / MATTERS WITH THE PHYSEAL PLATE

Mohd Fairudz Mohd Miswan¹, Muhammad Farhan Izani¹, Alan Basil Peter¹, Abdul Razak Hussin²

¹Universiti Institut Teknologi Mara, ²Hospital Selayang

Introduction: Skeletal immaturity is a condition characterized by open growth plates with expected significant axial growth. Recent studies have reported midsubstance anterior cruciate ligament tears to be more frequently than previously thought in skeletally immature patients. Indication for surgery is to be tailored to each patient and should be based on clinical factors like functional instability, remaining knee growth and patient expectations.

Discussion: We report two cases of ACL reconstruction done for two 15-year-old male patients who sustained anterior cruciate ligament tear. Both of them have had a high grade anterior laxity of the knee and magnetic resonance imaging showed an isolated complete tear of the anterior cruciate ligament. Surgery as per standard treatment for ACL tear was scheduled for the first patient. Plain knee radiographs and MRI images revealed near complete closure of the physeal plate comparative to his age. The subsequent case, partial physeal sparing technique was considered. MRI revealed an open physeal plate and also a heterogeneous metadiaphyseal fibrous cortical defect at superolateral aspect of the left femoral condyle. Therefore, we undertook the decision to place the graft more-horizontal than the usual placement (vertical position) to avoid the button ending up within the area of the lesion.

Conclusion: Anterior cruciate ligament reconstruction in younger patients who are approaching skeletal maturity and with little growth remaining, it is recommended to perform the standard procedure as in adult. Correct timing and indication should be undertaken by the surgeon.