

APLASIA OF THE ANTERIOR CRUCIATE LIGAMENT WITH A COMPENSATING POSTERIOR CRUCIATE LIGAMENT

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Aplasia of the anterior cruciate ligament is a rare condition and is usually associated with other abnormalities of the lower extremities. We report aplasia of the anterior cruciate ligament with a compensating posterior cruciate ligament in a 15-year-old boy.

Keywords : anterior cruciate ligament ; aplasia.

Mots-clés : ligament croisé antérieur ; aplasie.

INTRODUCTION

Congenital absence of the anterior cruciate ligament (ACL) is a rare condition and has previously only been reported in association with other anomalies of the lower limb (4). We therefore found it of interest to report a case without any of the known associated anomalies and without a positive anterior drawer sign because of a compensating posterior cruciate ligament (PCL).

CASE REPORT

A 15-year-old boy was admitted to the hospital for osteochondritis dissecans suspected on x ray of the lateral epicondyle of the left femur. For 2 years the patient had suffered from intermittent pain in the left popliteal fossa without known trauma to the knee. There had been no swelling, and the knee had never locked. There was no knee instability. The patient lived a normal life for his age, and participated in soccer.

At admission the patient complained of accentuated pain after physical activity. On repeated clinical examinations the knee joint appeared normal without swelling, pain or patellar crepitation. The knee was stable with a negative

anterior drawer sign, unrestricted motion and without muscular atrophy. Neither upper nor lower extremities showed any sign of abnormality.

X ray of both knees with tomography of the left showed a 15 × 15-mm osteochondritis dissecans in the lateral epicondyle of the left femur. There were no other deformities in the bone or joint, in particular not in the intercondylar eminences.

Arthroscopy was performed through a central approach. The patella showed no sign of chondromalacia or lateral impingement. The menisci were normal without any lesions. Both femoral epicondyles were free from pathological changes, and the suspected osteochondritis could not be found. The ACL was totally absent (fig. 1), whereas the PCL was larger than normal. Its origin on the medial femoral epicondyle was unaltered ; the extremely long insertion, however, extended from the posterior intercondylar area forward onto the intercondylar eminence. The joint capsule was normal.

It was not possible to offer this patient any kind of surgical treatment.

DISCUSSION

Different anomalies have been described in connection with aplasia of the cruciate ligaments. Aplasia was first reported in the presence of congenital dislocation of the knee (3). Since then

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it has been reported in association with congenital short femur (1, 2), congenital absence of the menisci (5) and tibial/fibular or femoral dysplasia (4). All of the patients in these studies had a varying degree of knee symptoms, but they all had

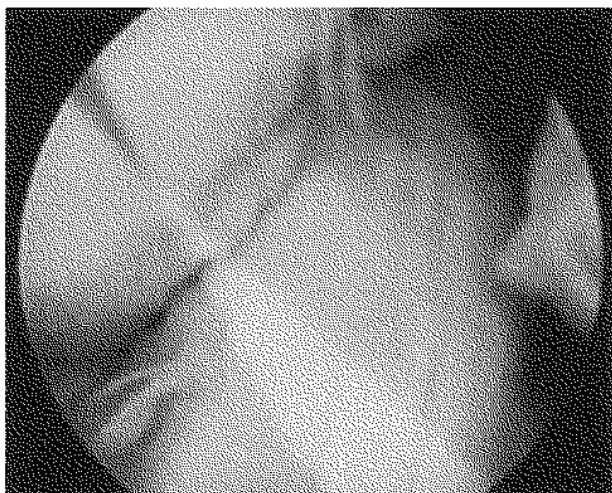


Fig. 1a

a positive anterior drawer sign in common. Our patient only complained of intermittent knee pain, and on repeated clinical examinations the knee was found normal without any sign of instability or impaired function.

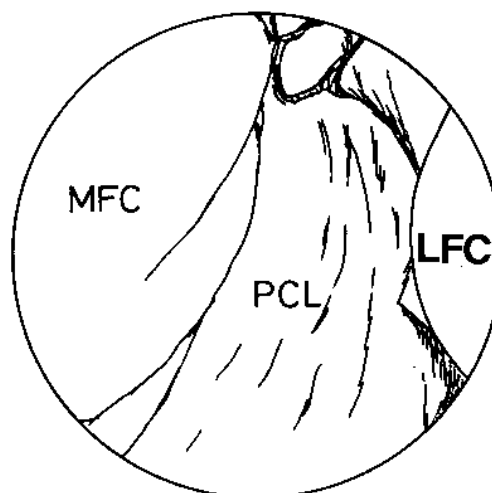


Fig. 1b

Fig. 1a and 1b. — Arthroscopic photograph and diagram. Central view in the left knee joint. The ACL is absent, and the PCL dominates the view.

LFC : lateral femoral condyle.

MFC : medial femoral condyle.

At arthroscopy no ACL was found. However, the PCL extended so far anteriorly that this, together with the surrounding muscles, seemed to stabilize the knee sufficiently to avoid instability. Previous rupture of the ACL followed by resorption was unlikely, as relevant trauma was not present and the PCL compensated by its altered structure. The patients' knee pain could not be explained by these findings.

Aplasia of the ACL and a compensating PCL seem to be an incidental finding of unknown incidence.

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SAMENVATTING

A. P. ANDERSSON en N. ELLITSGAARD. Aplasie van de voorste kruisband met een compensatie door de posterioere kruisband.

Aplasia van de voorste kruisband (VBK) is eerder zeldzaam en werd voorheen alleen beschreven in associatie met andere afwijkingen van het onderste lidmaat. De auteurs rapporteren één geval van aplasia van de VKB, zonder gekende geassocieerde afwijkingen van het onderste lidmaat en zonder positieve tiroir, dankzij een compensatie door de posterioere kruisband (PKB).

RÉSUMÉ

A. P. ANDERSSON et N. ELLITSGAARD. Aplasie du ligament croisé antérieur avec compensation par le ligament croisé postérieur.

L'absence congénitale de ligament croisé antérieur (LCA) est rare et ne fut antérieurement décrite qu'en

association avec d'autres anomalies du membre inférieur.

Les auteurs présentent un cas sans aucune anomalie associée et sans tiroir antérieur, grâce à la compensation assurée par le ligament croisé postérieur (LPC).