OBJECTIVES

Anterior cruciate ligament (ACL) tears are frequently associated with meniscal injury. Numerous authors have described associations between the presence of a meniscal tear at the time of ACL reconstruction and time to surgery and number of instability episodes. The purpose of this study was to evaluate the relationship between age and the presence of a meniscal tear at the time of ACL reconstruction in children and adolescents.

METHODS

A single-institution retrospective review was performed of consecutive pediatric and adolescent patients who underwent ACL reconstruction over a 3.5-year period at a single institution. Inclusion criteria were age less than 20 years and an ACL injury treated with knee arthroscopy and ACL reconstruction. Patients with multiligament knee injuries were excluded. A chart review was performed to obtain demographic information and intra-operative findings. Meniscus tears were defined as tears documented during diagnostic arthroscopy.

RESULTS

461 patients met inclusion criteria, including 226 males (49%) and 235 females (51%) with a mean age of 15 years (range 7–20 years). The right and left knees were affected equally. 270 patients (80%) had intra-operative evidence of a meniscal tear, including 215 lateral meniscus tears (56%) and 119 medial meniscus tears (44%). Sixty-four patients (14%) had both medial and lateral meniscus tears.

Age at surgery was found to be a statistically significant independent predictor of the presence of a meniscus tear, odds ratio = 1.14, 95% CI (1.05–1.25), p = 0.003. For every 1-year increase in age, there is a 14% increase in the odds of having a meniscus tear and this is depicted in the figure below.

DISCUSSION

Among children and adolescents with anterior cruciate ligament tears, for every 1-year increase in age, there is a 14% increase in the odds of having a meniscus tear. Adolescents over the age of 13 years had a significantly greater rate of meniscus tears than did those 13 years of age and younger. A complete arthroscopic examination with close attention to the menisci is required to diagnose and treat meniscal tears. Surgeons should be comfortable with all meniscus repair techniques, including inside-out, outside-in, all-inside, radial, and transosseous root repairs as the majority of children and adolescent patients with ACL tears also have an associated meniscus tear.