ISOKINETIC DEFICITS AT 6 MONTHS AFTER ACL RECONSTRUCTION INFLUENCE THE RATE OF REINJURIES AND ACTIVITY LEVEL

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10.1136/bjsports-2021-IOC.176

Background Recent evidence suggests that athletes may not be prepared to return to sport at 6 months following an anterior cruciate ligament (ACL) reconstruction.

Objective Identify knee isokinetic neuromuscular deficits at 6 months after ACL reconstruction and assess if deficits impact on the rate of new knee injuries and level of activity.

Design Retrospective study.

Setting Recreational and competitive athletes.

Patients (or Participants) Fifty-eight patients (27.1±7.1 years old; 79% male) that underwent ACL reconstruction (62% hamstring and 38% bone-patellar-tendon-bone grafts) and that performed knee isokinetic testing at 6 months.

Interventions (or Assessment of Risk Factors) Bilateral knee isokinetic assessment at 6 months, 6 and 8 Con/Con repetitions, at 60°/s and 180°/s, respectively.

Main Outcome Measurements Peak torque of knee extensors and flexors at 60°/s and 180°/s and Con/Con unilateral ratio. Prevalence of bilateral (>10%) and unilateral ratio (<0.47 and >0.80) abnormalities. The level of activity (Tegner) and number of new knee injuries (ACL or other knee injury).

Results Fifty-two participants (90%) had bilateral deficits at 60°/s, 74% and 59% for knee extensors and flexors, respectively. Unilateral abnormalities were present on 16% of participants at 60°/s and 180°/s. Thirty-seven participants had 2 or more years follow-up (28 hamstrings and 9 bone-patellar-tendon-bone grafts). From these, there were 4 new ACL injuries (75% contralateral) and 8 other knee injuries (50% contralateral). Rate of new knee injuries was more frequent on hamstrings (25% vs 10%). Those with bilateral deficits at 60°/s (n=31) had higher rate of new knee injuries (23% vs 17%) and higher rate of Tegner level decrease (45% vs 17%).

Conclusions We found an unexpectedly high rate of participants (90%) display knee isokinetic bilateral deficits at 60°/s at 6 months after ACL reconstruction. Bilateral deficits seem to influence the rate of new knee injuries and Tegner activity level.

RISK FACTORS FOR CONTRA-LATERAL SECONDARY ANTERIOR CRUCIATE LIGAMENT INJURY: A SYSTEMATIC REVIEW WITH META-ANALYSIS

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10.1136/bjsports-2021-IOC.178

Background There is limited knowledge about which risk factors that contribute to the high numbers of contra-lateral anterior cruciate ligament (C-ACL) injury after primary ACL injury.

Objective To systematically review intrinsic risk factors for sustaining a C-ACL injury.

Design A systematic review with meta-analysis according to the PRISMA guidelines. Four databases (MEDLINE, CINAHL, Embase, SportDiscus) were searched from inception to January 2020. Meta-analyses were performed and expressed as odds ratios (OR).