Does graft choice affect osteoarthritis development in the knee after anterior cruciate ligament reconstruction?

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Dear Editor,

We congratulate your journal and the authors Sajovic et al. on their valuable study [4]. The authors report that good or excellent results can be obtained in the majority of ACL reconstructions using either patellar tendon or hamstring tendon autografts and both grafts provided good subjective outcomes and objective stability with no significant differences between the grafts at 5 years.

ACL reconstructions using either patellar tendon or hamstring tendon autografts are routinely performed all over the world. However, recent studies show that ACL reconstruction, via the use of patellar tendon autograft, causes early osteoarthritis development in the knee, especially if accompanied by meniscal injury [1, 2]. This osteoarthritis develops secondary to a decrease in bone mineral density [3]. That is why, due to decreased harvest-site symptoms and radiographic osteoarthritis, the authors recommend hamstring tendon reconstructions for their patients [1, 2]. In the authors' study, ACL injury was accompanied by meniscal injury in 39 patient (20 in STG group, 19 in PT group) [4].

Because most patients who have undergone ACL reconstruction are young, we recommend that the surgeon

not only considers early complications (patellar fracture, patellar tendon ruptures, anterior knee pain) and midterm differences between graft outcomes, but also considers further complications such as osteoarthritis, which is secondary to patellar tendon autograft. If the surgeon is experienced, STG must be the first choice for ACL reconstruction. We think this information is important to our readers.

The authors also stated, in the Results section, that time from injury to operation was 5 months in patients in the patellar tendon group and 6 months in patients in the STG group. However, in Table 1, time from injury to surgery was 23 months (1–60) for PT and 25 months (1–84) for STG. Which one is true?

References

1. Keays SL, Bullock-Saxton JE, Keays AC, Newcombe PA, Bullock MI (2007) A 6-year follow-up of the effect of graft site on strength, stability, range of motion, function, and joint degeneration after anterior cruciate ligament reconstruction: patellar tendon versus semitendinosus and gracilis tendon graft. *Am J Sports Med* 35 (5):729–739
2. Pinczewski LA, Lyman J, Salmon LJ, Russell VJ, Roe J, Linklater J (2007) A 10-year comparison of anterior cruciate ligament reconstructions with hamstring tendon and patellar tendon autograft: a controlled, prospective trial. *Am J Sports Med* 35(4):564–574
3. Rittweger J, Maffulli N, Maganaris CN, Narici MV (2005) Reconstruction of the anterior cruciate ligament with a patella-tendon-bone graft may lead to a permanent loss of bone mineral content due to decreased patellar tendon stiffness. *Med Hypoth* 64 (6):1166–1169
4. Sajovic M, Strahovnik A, Komadina R, Dernovsek MZ (2007) The effect of graft choice on functional outcome in anterior cruciate ligament reconstruction. *Int Orthop* DOI 10.1007/s00264-007-0341-x

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