Clinical Capsules

Limiting Tunnel Widening in ACL Repair

A novel hamstring anterior cruciate ligament reconstruction technique that uses a shorter, more rigidly fixed graft prevents the tunnel widening that can lead to a bungee-cord effect following ACL repair.

Dr. Peter Fauno of Randers (Denmark) Central Hospital and colleagues randomly assigned 100 patients to undergo either the new technique using a transfemoral fixation implant with an interference screw in the tibial tunnel, or extracortical fixation in the femur with a bicortical screw and washer distal to the tibial tunnel. A total of 87 patients were available for assessment at 1-year follow-up.

Patients who underwent the new technique had a lower incidence of tunnel widening, compared with those in the conventional technique group (Arthroscopy 2005;21:1337-41.)

A total of 7 of 41 patients (17%) undergoing transfemoral fixation implantation with an interference screw in the tibial tunnel experienced femoral tunnel widening; 5 patients (12%) in that group experienced tibial tunnel widening.

By comparison, 20 of 46 patients (44%) who received extracortical fixation had femoral tunnel widening; 16 patients (35%) in that group had tibial tunnel widening.

Despite the similarity in clinical outcome at 1 year and assuming tunnel widening has no clinical implications, Dr. Fauno believes the risk of tunnel widening should be kept as low as possible.

Vitamin D Beats Calcium for Bones

Vitamin D sufficiency appears to be more important for bone health than is high calcium intake, according to Laufey Steingrimsdottir, Ph.D., of the Public Health Institute of Iceland, Reykjavik, and associates.

Both nutrients are known to influence calcium homeostasis, but the relative contributions of each haven't been studied before, they said (JAMA 2005:294:2336-41).

Vitamin D supplements should be recommended "when sun exposure and dietary sources are insufficient," Dr. Steingrimsdottir and associates said.

The researchers assessed the relative importance of calcium intake and serum levels of 25-hydroxyvitamin D for maintaining calcium homeostasis in a study of 944 healthy white adult residents of Iceland. The 491 women and 453 men were aged 30-85 years.

Most Icelanders take vitamin supplements or cod liver oil to supply vitamin D because there isn't sufficient sunshine there throughout the year for adequate biosynthesis of vitamin D. Most also have a relatively high calcium intake, chiefly through the consumption of dairy products. In this study, the mean intake of both vitamin D and calcium were well above recommended levels in all age groups, although there was great variation.

Vitamin D status was found to ensure ideal values for serum parathyroid hormone, a marker of bone health, even when calcium intake was not sufficient to maintain those PTH levels. In contrast, high calcium intake did not make up for decreased vitamin D.

In addition, mean serum ionized calcium levels, a more precise marker of calcium homeostasis and thus of bone health, were found to be dependent on serum 25-hydroxyvitamin D levels, but not on calcium intake.

"Our study indicates that as long as vitamin D status is secured by vitamin D, supplements or sufficient sunshine calcium intake levels of more than 800 mg [per day] may be unnecessary," the investigators noted.

Botox Effective for Tennis Elbow Pain

Botulinum toxin injections may provide short-term pain relief for patients with lateral epicondylitis, Chinese researchers have reported.

A randomized, placebo-controlled trial of botulinum toxin in 60 patients with lateral epicondylitis was conducted at Prince of Wales Hospital in Hong Kong. Dr. Shiu Man Wong and colleagues administered either a single 60-unit injection of botulinum toxin type A or an equivalent volume of normal saline to patients.

Baseline pain scores, using a 100-mm visual analog scale (VAS) of 65.5 mm at baseline, improved to a score of 25.4 mm at 4 weeks in patients receiving botulinum toxin. In controls, the VAS score was 66 mm at baseline and 51 mm at 4 weeks (Ann. Intern. Med. 2005;143:793-7).

Twelve weeks after injection, VAS scores were 23.5 mm for the study group and 43.5 mm for controls.

Mild paresis of the fingers was found at the 4-week check in four patients in the study group, with symptoms persisting in one patient through 12 weeks of follow-up. No patient in the placebo group developed finger paresis. Weak finger extension in the affected limb was noted in 10 patients who received botulinum toxin and in 6 patients in the placebo group.

There was no significant difference in grip strength between the two groups during the study period.

—Martha Kerr and Mary Ann Moon

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