

# Wrong Tendon Graft Choice Could Trigger Knee OA

*Anterior cruciate ligament repair leads to more knee osteoarthritis cases than hamstring tendon autografts.*

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**K**nee joint osteoarthritis was significantly more common at 5 years after anterior cruciate ligament reconstruction in patients with patellar tendon autografts than in those with hamstring tendon autografts.

Dr. Matjaz Sajovic, along with researchers from the General Hospital Celje and the University of Ljubljana (Slovenia), conducted a prospective controlled study in which 64 patients with anterior cruciate ligament (ACL) rupture were randomized to reconstruction with hamstring tendon autografts (32) or patellar tendon autografts (32).

The comparative success of the two procedures and their associated incidence of early knee joint osteoarthritis were compared 5 years after surgery.

Among the 54 patients (85%) available for clinical and radiographic follow-up, there were no significant differences in graft rupture or contralateral ACL rupture in the 28 with hamstring tendon grafts and the 26 with patellar tendon grafts. Returns to preinjury activity levels were similar in the hamstring tendon group, 23 of 28, and in the patellar tendon group, 23 of 26. Among those with hamstring tendon autografts, grafts ruptured in two patients and contralateral ACLs ruptured in two. In those with patellar tendon autografts, grafts ruptured in two and contralateral

ACLs ruptured in three (*Am. J. Sports Med.* 2006;34:1933-40).

Clinical and subjective test results were similar for the two groups; however, osteoarthritic changes significantly differed. Radiographic grade B knee joint osteoarthritis was present at the 5-year follow-up in 13 of the 26 patients (50%) with patellar tendon autografts and in 5 of the 28 patients (17%) with hamstring tendon autografts.

In other studies, osteoarthritis rates have been higher after meniscal resection. The authors attribute the lower rate in their study to significantly more ( $P = 0.027$ ) subtotal meniscal resections performed in the hamstring tendon group, 12 of 28 patients, compared with the patellar tendon group, 4 of 26.

Further, medial meniscal injury was noted at reconstruction in 12 of 28 with hamstring tendon autografts and in 12 of

26 with patellar tendon autografts. Lateral meniscal injury was noted in six patients in each group. "It is difficult to obtain patients with solitary ACL tears without any other intra-articular lesions," the investigators said.

At 5-year follow-up, radiographic evidence of knee joint osteoarthritis was significantly elevated in patients from the patellar tendon group ( $P = 0.012$ ). This finding "emphasizes the hypothesis that the choice of the graft is crucial in the development of degenerative knee joint disease at 5 years after ACL reconstruction."

Only one previous prospective, long-term study has compared the two autografts, but the findings excluded all patients with more than one-third meniscectomy and atraumatic graft failure. After 7 years, patellar tendon grafts were associated ( $P = 0.002$ ) with more osteoarthritis (*Am. J. Sports Med.* 2005;33:1337-45). ■

## Antibiotics, Drainage Help Control Postarthroscopic Septic Arthritis

BY DIANA MAHONEY  
New England Bureau

**TORONTO** — Most cases of septic arthritis resulting from arthroscopic joint surgery can be controlled with conservative treatment comprising prolonged IV antibiotics and surgical drainage, as long as there is no bone involvement and the affected joint has not been compromised, Dr. Carla Vizzotti said at the annual meeting of the Infectious Diseases Society of America.

Although postarthroscopic septic arthritis (PASA) is an infrequent condition, it can result in significant morbidity if not properly treated and can interfere with patients' recovery, Dr. Vizzotti said in a poster presentation.

Because medical and surgical therapies for the condition are not standardized, Dr. Vizzotti and colleagues at the Fundación Centro de Estudios Infectológicos in Buenos Aires, conducted a retrospective investigation to identify optimal management strategies.

The investigators reviewed the records of 61 patients treated for PASA between November 1991 and November 2005. Patients were included in the investigation if, following a diagnostic or operative arthroscopic procedure, they developed at least one of the clinical signs of arthritis—increased pain, swelling, and warmth—in the affected joint, and/or developed a fever and had a positive culture or grossly or

macroscopically purulent synovial fluid.

The mean age of the patients was 37.2 years and the mean follow-up period was 32.5 months.

Among the 61 patients, there were a total of 63 infections, including 58 in the knee, 4 in the shoulder, and 1 in the ankle. Of the 63 infections, 41 occurred in patients who underwent arthroscopic ligament repair that included a graft or implant insertion.

**'As long as the joint is stable and functioning, and if there is no bone involvement, it is uncommon for a patient to require graft or implant removal,' study findings suggest.**

In terms of clinical presentation, fever and pain were each noted in 41 cases; red skin, swelling, and/or warmth were present in 53 cases; fistula and purulent discharges were each noted in 9 cases; functional impotence occurred in 10 cases; and an elevated erythrocyte sedimentation rate (greater than 50 mm/hour) was reported in 7 cases.

Microbiologic data were available for all but two of the infections.

Gram-positive cocci were implicated in 39 of the infections, gram-negative bacilli were identified in 9 of them,

and negative cultures were noted in 13, Dr. Vizzotti reported. All of the patients received antibiotic therapy—primarily  $\beta$ -lactams—for a mean of 9.2 weeks.

Surgical drainage was used in 48 of the 63 infections, including arthroscopic irrigation and lavage of the joint in 38 cases, lavage of the joint via arthrotomy in 2 cases, needle aspiration in 6 cases, and combined needle aspiration and arthroscopic irrigation in 2 cases.

Of the study population, only four patients required removal of the grafts or implants that were used to repair the ligaments because of joint instability and/or bone involvement, Dr. Vizzotti said.

Treatment resulted in cure or significant improvement in 97% of the patients.

Three patients experienced complications of infection, including osteomyelitis in two patients and toxic shock syndrome in one.

The findings of the study suggest that most patients with postarthroscopic septic arthritis can be successfully treated with a combination of antibiotics and joint irrigation and lavage, Dr. Vizzotti stated.

Additionally, "as long as the joint is stable and functioning, and if there is no bone involvement, it is uncommon for a patient to require graft or implant removal," she said.

Dr. Vizzotti reported having no financial disclosures relative to her presentation. ■

## When It Comes to Pain, Medication Trumps Advice

BY JONATHAN GARDNER  
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**P**harmaceutical management or physical therapy for older adult knee-pain patients yielded significantly greater short-term pain reduction than written and oral advice on coping with knee pain, according to a randomized clinical trial.

The trial (*BMJ* 2006 Oct. 20 [Epub doi:10.1136/bmj.38977.590752.0B]) randomized 325 knee-pain patients 55 years of age and older from North Staffordshire (England), into equal-sized groups—one received up to six 20-minute sessions of physical therapy over 10 weeks with additional home exercises, another received advice from a community pharmacist in up to six 20-minute meetings, and a control group received a booklet and a telephone call from a rheumatology nurse.

Researchers, led by Dr. Elaine Hay, a professor in community rheumatology at the Primary Care Musculoskeletal Research Centre, Keele University, chiefly measured improvements on the Western Ontario and McMaster Universities osteoarthritis index (WOMAC) at 3, 6, and 12 months.

At 3 months, the researchers found that the intervention groups both had shown a significantly greater improvement than the control group on the 20-point WOMAC pain scale.

The pharmacy group had improved by a mean of 1.59 points to 7.49, the physiotherapy group by a mean 1.56 to 7.36, compared with the control group's improvement of 0.41 to 8.99. ■

By 6 months, neither intervention group was showing a significant improvement over the control group.

On the 68-point WOMAC physical function scale, the physiotherapy group improved by a mean score of 4.79 points to 24.27 at 3 months, significantly better than the control group's improvement of 0.80 to 30.18, the trial found. The difference was not sustained to 6 or 12 months.

The researchers added, however, that the physical therapy group consulted general practitioners less frequently, and the pharmacy and physical therapy groups took fewer NSAIDs than the control group. The pharmacy group did take significantly more analgesics, however.

"Interventions by pharmacists have been shown to favorably influence prescribing to reduce adverse drug reactions, improve the appropriateness of drug use, reduce drug costs, and improve compliance in a range of conditions," the authors wrote.

"Our trial adds to this evidence by showing that evidence-based care for adults over 55 with knee pain, delivered by primary care pharmacists and physiotherapists, results in short-term improvements in health outcome, reduction in use of nonsteroidal anti-inflammatory drugs, and high patient satisfaction," the investigators continued.

The researchers cited as a potential weakness of the trial their "lack of information about patients' adherence to treatment, which is likely to be an important determinant of clinical outcome." ■