Meniscectomy Associated With Knee Osteoarthritis

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SAN DIEGO — Patients who underwent meniscectomy had a 10- to 18-fold increased likelihood of developing tibiofemoral osteoarthritis in the operated knee at follow-up of 15-22 years, compared with a group of controls, results from a large Swedish study demonstrated.

Moreover, these patients were significantly more likely than controls to develop concomitant patellofemoral osteoarthritis (OA) in the index knee and tibiofemoral OA in the contralateral, nonoperated knee, Dr. Stefan Lohmander reported at a symposium sponsored by the International Cartilage Repair Society.

"A meniscus tear is not simply a meniscus tear," said Dr. Lohmander, of the department of orthopedics at Lund (Sweden) University Hospital. "We need to differentiate between a tear in a healthy meniscus in a normal joint and a tear in a degenerated meniscus in a joint that may already be developing OA. We suggest that a degenerative meniscus lesion is an early signal of OA susceptibility. As a consequence, postinjury OA as a catch-all term for the OA associated with this kind of meniscus injury is not correct. The same disease process that leads to cartilage damage in the OA joint can even earlier lead to a damaged meniscus, prone to a tear."

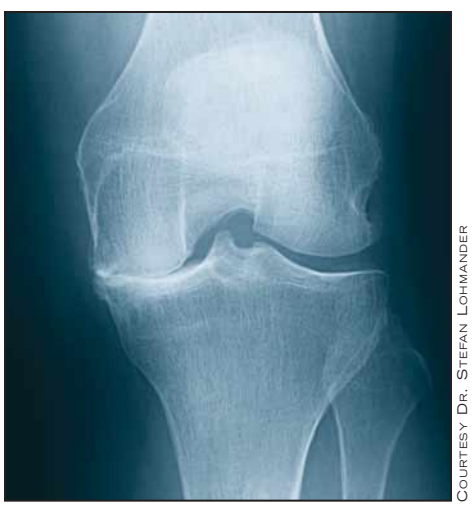
He went on to speculate that patients with meniscus lesions "are actually young patients with old knees. The symptoms of their OA actually start at the meniscus, and the meniscus tear is just a signal event in the development of OA."

In an effort to determine the long-term consequences of meniscal injury and repair, he and his associates studied a group of 319 patients with isolated meniscus lesions who had no radiographic OA at index arthroscopy and no previous surgery. Postoperative follow-up ranged from 15 to 22 years and included standardized radiographs, validated questionnaires, functional tests, and biomarkers.

The average patient age at assessment was 54 years, and most (79%) were men. The mean body mass index of patients was 26 kg/m^2, and most (80%) had undergone medial meniscectomy.

A control group of 68 age-matched, uninjured patients was used as a reference.

At 15- to 22-year follow-up, 45% of patients who underwent medial meniscectomy and 57% of patients who underwent lateral meniscectomy had tibiofemoral OA in their index knee, which translated into adjusted odds ratios of 9.5 and 18.3, respectively.



COURTESY DR. STEFAN LOHMANDER

Tibiofemoral OA developed in this contralateral, nonoperated knee.

In addition, 19% of patients who underwent medial meniscectomy and 27% of patients who underwent lateral meniscectomy had patellofemoral OA in their index knee at follow-up, which translated into adjusted odds ratios of 2.6 and 5.3, respectively.

Finally, 22% of patients who underwent medial meniscectomy and 21% of patients who underwent lateral meniscectomy had tibiofemoral OA in their nonoperated contralateral knee at the 15- to 22-year follow-up, which translated into adjusted odds ratios of 3.5 and 4.4, respectively. Dr. Lohmander noted that this increased risk of OA in the "other knee" may be another sign that these individuals have a higher-than-average risk for OA in general.

There was no major difference in the OA risk for those who had subtotal removal of their meniscus and those who had only a partial removal by surgery. There are no published randomized studies to support the suggestion that meniscal repair or retransplantation can prevent future OA development.

Dr. Lohmander called for more controlled, randomized, blinded prospective trials to evaluate the long-term outcome of meniscal injury and repair. ■

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