'All-inside' meniscal repair shows good long-term outcomes

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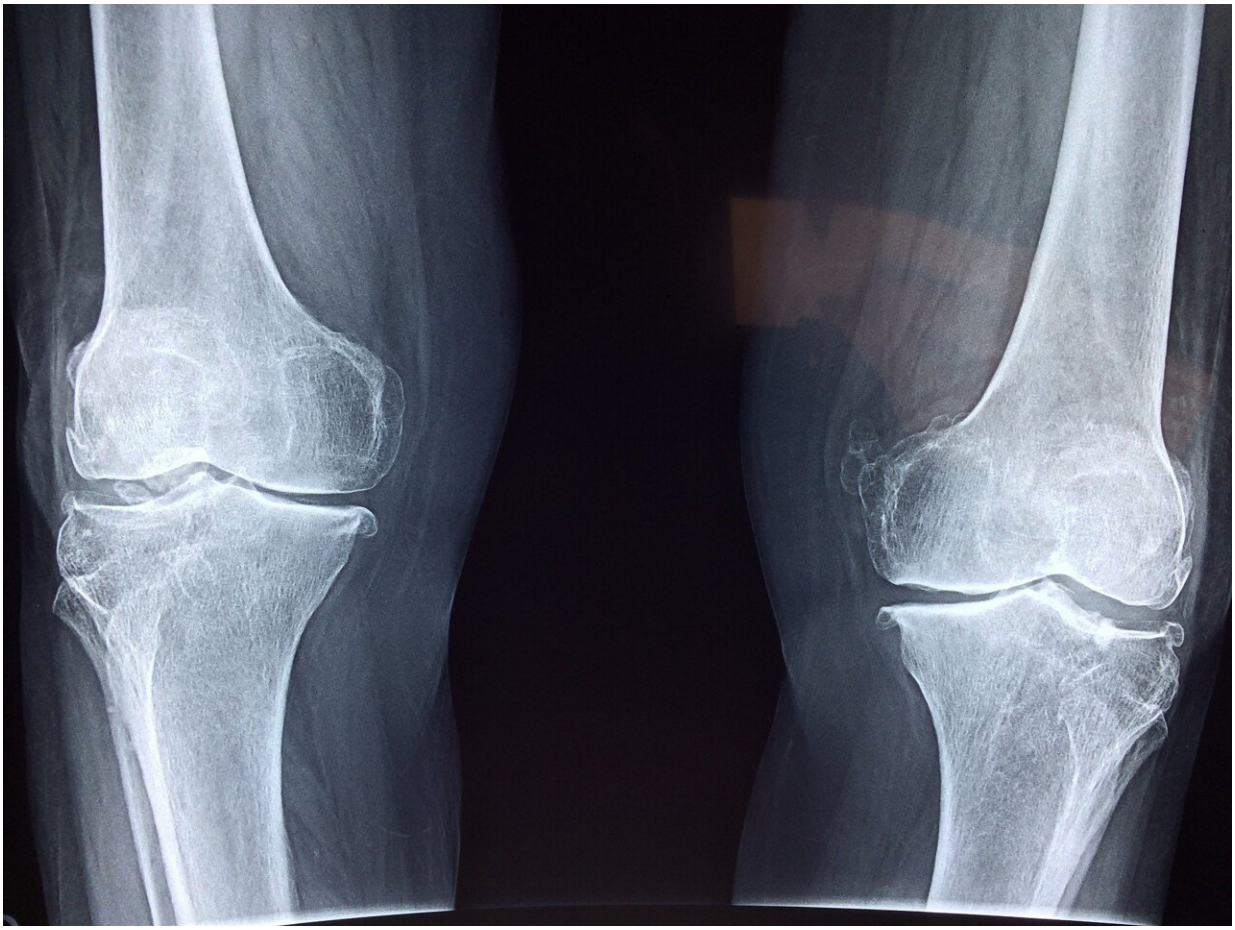

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A second-generation "all-inside" meniscal repair system provides a high

success rate at long-term follow-up, reports a study in the*Journal of Bone & Joint Surgery*.

"Our 10-year results of second-generation, all-inside repair were better than those of first-generation implants and equivalent to those seen with the other common techniques," according to the new research, led by Rick W. Wright, MD, of Vanderbilt University Medical Center, Nashville.

Long-term follow-up after meniscal repair using FasT-Fix system

For patients with meniscal tears in the knee joint, treatment focuses on repairing and preserving the damaged meniscus whenever possible. All-inside meniscal repair techniques were developed as an alternative to previous arthroscopic "inside-out" techniques.

Subsequent second-generation all-inside repair devices brought further advances, quickly becoming the most common approach to meniscal repair. Previous reports suggest similar five-year outcomes with inside-out and current all-inside techniques, with failure rates of 14.2% and 15.8%, respectively.

However, few studies have presented 10-year follow-up data on the outcomes of second-generation all-inside techniques. "We hypothesized that all-inside repairs that have demonstrated good results at five years would maintain their reasonable outcomes beyond 10 years and remain equally successful compared with inside-out repairs," Dr. Wright and colleagues write.

The researchers analyzed the long-term outcomes of patients undergoing meniscal repair using the second-generation FasT-Fix system from 2002

through 2008. All patients underwent primary repair of a torn meniscus in conjunction with anterior cruciate ligament (ACL) reconstruction.

Of 81 treated patients, 69 were available for follow-up at 10 years postoperatively, including 40 male and 29 female patients with an average age of 26.5 years. The medial meniscus was repaired in 73% of patients and the lateral meniscus in 27%. The main outcome of interest was the successful repair rate, defined as not undergoing subsequent surgery related to the meniscus during follow-up.

Ten-year success rates of 84% to 88%

By this definition, the failure rate was 13% overall, with 12% for medial and 16% for lateral meniscal repairs. The average time to failure was 2.8 years for the medial repairs and 5.8 years for the lateral repairs. Risk of failure was unrelated to patient characteristics (i.e., age, sex, or body mass index) or surgical characteristics (i.e., graft type or number of sutures).

Patient-reported outcomes were better after meniscal repair and ACL reconstruction, as compared with preoperative baseline measurements. Both at the time of surgery and at long-term follow-up, these outcomes were similar for patients with successful versus failed repairs. Activity level was significantly lower at 10-year follow-up, consistent with previously reported age-related decreases.

The study provides new evidence that all-inside meniscal repair using the second-generation FasT-Fix system with concomitant ACL reconstruction, "is a reasonable approach with good long-term results." Dr. Wright and co-authors write, "In our series, 84% to 88% of the patients had continued success at a minimum of 10 years after the repair."

For reasons that are unclear, treatment failure seemed to occur earlier following medial compared with lateral meniscal repair. The researchers emphasize the need for "long-term follow-up... to adequately assess meniscal repair."

More information: Rick W. Wright et al, Ten-Year Outcomes of Second-Generation, All-Inside Meniscal Repair in the Setting of ACL Reconstruction, *Journal of Bone and Joint Surgery* (2023). DOI: 10.2106/JBJS.22.01196

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