

## Editorial Commentary: Which Factors Influence Osteoarthritic Progression After Meniscal Allograft Transplantation?



**Abstract:** In a recent article, the authors conducted radiologic follow-up evaluation for knees that had undergone isolated meniscal allograft transplantation. Postoperative osteoarthritic progression was observed in 45% of the knees. Among the demographic and clinical characteristics, medial meniscus allograft transplantation was identified as a significant risk factor for osteoarthritic progression. However, we still do not know whether meniscal allograft transplantation can prevent or retard the subsequent progression of osteoarthritis.

See related article on page 2539

**M**eniscus allograft has been established as a reliable procedure to restore meniscal function for symptomatic patients following meniscectomy; however, its role in the prevention of osteoarthritis has not been well clarified.<sup>1-3</sup> One of the reasons for variable results in previous clinical studies is heterogeneity in surgical indication, procedure, and radiologic evaluation methods among previous studies.

In an article entitled “Risk Factors for Radiographic Progression of Osteoarthritis After Meniscus Allograft Transplantation” from the present issue of *Arthroscopy*, Ahn, Kang, Yang, and Lee describe the results of their clinical study in which they examined the effects of potential risk factors on progression of osteoarthritis following meniscal allograft transplantation.<sup>4</sup> The authors had a fairly large patient population treated by a single surgeon, which is the strength of their study.

Their retrospective case control study of knees without high-grade chondral lesions that underwent isolated meniscal allograft transplantation compared the knees with and without osteoarthritic progression. Radiologic examination at an average follow-up period of 56.2 months showed that osteoarthritic changes progressed in 31 of the 69 knees (45%). Based on the results of a multivariate logistic regression analysis for multiple factors, the authors concluded that osteoarthritic changes increased with longer follow-up duration particularly for medial meniscal allograft.

This study provides valuable information that can help with effective patient selection and prediction of surgical outcome; however, the evidence derived from previous and present literature is still not robust enough to answer the question of whether meniscal allograft transplantation can prevent or retard the subsequent osteoarthritic progression. As stated by the authors, further studies—including well-designed clinical trials—are required to substantiate the chondroprotective value of this procedure. In addition, the effects of concomitant procedures such as high tibial osteotomy, cartilage repair procedure, and anterior cruciate ligament reconstruction on the radiologic outcome should also be broached in future studies.

Shinichi Yoshiya, M.D.  
Associate Editor

### References

1. Smith NA, Parkinson B, Hutchinson CE, Costa ML, Spalding T. Is meniscal allograft transplantation chondroprotective? A systematic review of radiological outcomes. *Knee Surg Sports Traumatol Arthrosc* 2016;24:2923-2935.
2. Myers P, Tudor F. Meniscal allograft transplantation: how should we be doing it? A systematic review. *Arthroscopy* 2015;31:911-925.
3. Lubowitz JH. Editorial commentary: meniscal allograft yields acceptable outcomes (for a salvage procedure). *Arthroscopy* 2015;31:926.
4. Ahn JH, Kang HW, Yang TY, Lee JY. Risk factors for radiographic progression of osteoarthritis after meniscus allograft transplantation. *Arthroscopy* 2016;32:2539-2546.