Title: **Is DNA Fingerprinting a Tool in Evaluating The Success Rate of Viable Meniscal Allografting?**

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Aim of the study: Meniscal allografting has been reported to allow for slow integration of recipient fibrochondrocytes into the transplanted meniscal tissue. The integration of recipient fibrochondrocytes into human *viable* meniscal allografts was evaluated in this study.

Methods***:*** 21 of 98 patients who had received an allogenic viable meniscal transplant, underwent a control arthroscopy. A biopsy specimen was harvested from the implanted menisci during this second operation. DNA fingerprinting was performed to evaluate possible ingrowth of the meniscal allograft by acceptor fibrochondrocytes.

Results***:*** The compared DNA region showed complete matching in 7 cases, incomplete matching (cell population of the recipient and the donor) in 4 cases, and non-matching in 3 cases. The remaining 5 cases could not be analyzed due to culture failure. Two patients underwent a second arthroscopy. The initial DNA determination was mixed and non-matching, and at the second arthroscopy this became matching and mixed DNA pattern, respectively.

Conclusion***:*** These findings suggest partial or complete ingrowth of the transplanted meniscus by acceptor fibrochondrocytes. However, non-matching does not imply a graft failure as evidenced by a simultaneous clinical examination using the Hospital for Special Surgery score, and by the macroscopic aspect during control arthroscopy. MRI performed prior to control arthroscopy and pathological examination of the retrieved fragment both showed a certain degree of mucoid degeneration in case of a non-matching DNA pattern.