

Time Interval Between Trauma and Arthroscopic Meniscal Repair has no Influence on Clinical Survival

Robert Van Der Wal, MD, NETHERLANDS

Bregje JW Thomassen, MSc, NETHERLANDS

Jan-Willem Swen, MD, NETHERLANDS

Ewoud RA Van Arkel, MD, PhD, NETHERLANDS

Medical Center Haaglanden
The Hague, NETHERLANDS

Summary:

The interval between trauma and arthroscopic meniscal repair has no influence on failure rate. Differences in survival rate of meniscal repair are more dependent on location of the lesion (medial versus lateral) and ACL status, rather than chronicity of injury.

Abstract:

PURPOSE

Arthroscopic meniscal repair is the gold standard for longitudinal peripheral meniscal tears. The time interval between trauma and meniscal repair is still controversial. The aim of this retrospective study was to evaluate failure rates and clinical outcome of arthroscopic meniscal repair system with and without anterior cruciate ligament reconstruction (ACLR) in relation to chronicity of injury.

STUDY DESIGN: Retrospective case series, level of evidence IV.

METHODS

Two hundred and thirty nine meniscal repairs were performed in 239 patients using an inside-out suture technique, an all-inside suture technique or a combination of both. Anterior cruciate ligament (ACL) was reconstructed in almost all (139 of 142) ACL deficient knees. Chronicity of injury was divided into acute (<2 weeks), subacute (>2 weeks- <12 weeks) and chronic (>12 weeks). Patients completed postal questionnaires to evaluate clinical outcome and failure rates. Study instruments included Lysholm, Knee injury and Osteoarthritis Outcome Score (KOOS) and Tegner scoring systems.

RESULTS

At a median follow-up of 33 months (interquartile range (IQR) 25 – 38 months) 50 medial and 9 lateral meniscal repairs failed (overall failure rate 18.8%). There was a significant higher failure rate for meniscal healing after a postponed ACLR ($p < 0.05$) and in medial meniscal repairs ($p < 0.05$). Functional outcome scores showed only significant differences on the KOOS Quality of life item (95% CI 5.06 – 40.60, $p < 0.05$). No significant difference was found for interval between trauma and repair.

CONCLUSION

The interval between trauma and arthroscopic meniscal repair has no influence on failure rate. Differences in survival rate of meniscal repair are more dependent on location of the lesion (medial versus lateral) and ACL status, rather than chronicity of injury.