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Factors Associated With Repeat Meniscus Surgery in Patients Undergoing Suture Meniscus Repair

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Summary:
In this study, medial meniscus suture repairs and repairs with concurrent ACL reconstructions (not staged) were factors that resulted in higher rates of repeat meniscus surgery.

Abstract:
Introduction:
Meniscus repairs with sutures have become more common as the importance of preserving the meniscus has been shown. Studies have shown a high rate of repeat surgery, but it is unclear what factors contribute to failure. The purpose of this study was to determine what factors lead to repeat surgery following suture meniscus repair.

Methods:
283 meniscus suture repairs were performed by a single surgeon. The average patient age was 31 years(range 18 to 71). There were 177 males and 106 females. All repairs were completed with an inside-out suture technique. 93 patients had concurrent ACL reconstruction and 44 had a 2-stage ACL reconstruction. 181 medial menisci and 102 lateral menisci were repaired. Of the medial repairs, 80% were in the posterior third of the meniscus, 11% in the middle third, 1% in the anterior third, and 8% extended to all areas of the meniscus. Of the lateral meniscus repairs, 49% were in the posterior third, 26% in the middle third, 22% in the anterior third, and 3% extended to all areas.

Results:
37 patients (13%) required repeat surgery on their repaired meniscus. 18% of the medial repairs and 10% of lateral repairs required repeat surgery. There were no differences based on age, gender or location of meniscus tear. The average time to repeat meniscus surgery was 2.5 years (range, 75 days to 13 years). 38% of repeat surgeries were within one year, 32% between one and two years, 16% between 3 and 5 years, and 14% greater than 5 years. Medial meniscus repairs required repeat surgery significantly earlier (1.8 years) compared to lateral meniscus repairs (4.5 yrs) (p=0.01). Staged ACL reconstructions had fewer second meniscus surgeries (2%) compared to concurrent ACL reconstructions (16%) (p=0.03). Patients who underwent concurrent ACL reconstructions were 7.6 times more likely to undergo repeat meniscus surgery compared to staged reconstructions [CI: 1.3 to 44.9].

Conclusion:
In this study, medial meniscus suture repairs and repairs with concurrent ACL reconstructions (not staged) were factors that resulted in higher rates of repeat meniscus surgery.