Middle-term Effects of Open Wedge High Tibial Osteotomy on Medial Compartment Cartilage and Meniscus Evaluated by MRI

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INTRODUCTION: Evaluate the effects of OWHTO (open wedge high tibial osteotomy) on the meniscus and cartilage of the medial compartment via MRI for up to 9 years.
METHODS: 24 knees with osteoarthritis or osteonecrosis underwent OWHTO, some combined with microfracture (MF) or meniscus partial resection. X-rays and MRIs were done pre-operation, early-term (1-2 years), and mid-term (5-9 years). We assessed MOCART scores, T2 relaxation times, and medial meniscus extrusion (MME).
RESULTS: Pre-op %MA 32%, mid-term 62%, MPTA increased from 85 to 92 degrees. MOCART scores were stable early to mid-term but lowest in MF and meniscus resection groups. T2 relaxation times in the medial femoral condyle and tibial plateau decreased significantly ($P < .05$). MME showed no statistical difference, though increased in the meniscectomy group.
DISCUSSION AND CONCLUSION: OWHTO positively affects medial cartilage and meniscus but shows insufficient repair on MRI. MME tended to progress post-meniscectomy.