Short-term results (two-year outcomes) following minced cartilage procedure on the upper ankle joint. A prospective longitudinal study.

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INTRODUCTION:
The surgical treatment of chondral and osteochondral lesions in the upper ankle joint, particularly in the talus, presents a significant challenge and can be addressed using various procedures (e.g., Microfracture, AMIC, OATS). To date, limited data are available on the so-called Minced Cartilage procedure for talar cartilage defects. The aim of this study was to evaluate this surgical treatment for talar cartilage defects after two years.
METHODS: Between March 25, 2021, and September 1, 2023, a total of 40 patients were included in this prospective longitudinal study. Inclusion criteria were isolated cartilage defects in the talus, an age between 18 and 50 years, and a BMI below 30 kg/m2 (men) or below 26 kg/m2 (women). All patients were treated by a single surgeon and registered in the "German Arthroscopy Registry (DART)", where all questionnaires were collected. In addition to baseline data, the FAOS score and EFAS score were assessed preoperatively, as well as 12 and 24 months postoperatively. The collected data were statistically analyzed using SPSS. Normal distribution was tested, followed by either a T-test or Wilcoxon signed-rank test for comparison. The study currently includes 40 one-year results and the first 21 two-year results.
RESULTS: The results after two years are as followed. The mean symptom duration was 9.26 months, and the average defect size measured 14.4 mm x 11.1 mm x 5.2 mm. The study comprised 14 men and 4 women (three n.s.), with an average age of 27.47 years and a BMI of 25.02 kg/m2. According to the FAOS score, the two-year results showed a significant improvement in the total FAOS score (p=0.022), symptoms (p=0.002), daily activities (p=0.003), and sports and recreational activities (p=0.001). The EFAS score also demonstrated a significant improvement in sports-specific abilities (p=0.001)
DISCUSSION AND CONCLUSION: This study demonstrates that the minced cartilage procedure can achieve reliable outcomes in talar cartilage defects. The significant improvements observed in FAOS and EFAS scores after two years indicate the potential of this method as an effective treatment option. Further research, particularly long-term studies with larger patient cohorts, is necessary to comprehensively evaluate the long-term effects and success of this procedure.