

Outcome Of Autologous Matrix Induced Chondrogenesis (Amic) In Cartilage Knee Surgery: Data Of The Amic Registry.

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Summary:

Outcome of Autologous Matrix Induced Chondrogenesis (AMIC) in cartilage knee

Abstract:

Purpose: Autologous Matrix Induced Chondrogenesis (AMIC) is an innovative treatment for localized full-thickness cartilage defects combining the well-known microfracturing with a collagen I/III scaffold. The purpose of this analysis was to evaluate the medium-term results of this enhanced microfracture technique for the treatment of chondral lesions of the knee.

Methods and Materials: Patients treated with AMIC (Chondro-Gide®, Geistlich Pharma, Switzerland) were followed using the AMIC Registry, an internet-based tool to longitudinally track changes in function and symptoms by the Lysholm score and VAS.

Results: A series of 57 patients was enrolled. The average age of patients (19 females, 38 males) was 37.3 years (range 17 to 61 years). The mean defect size of the chondral lesions was 3.4 cm² (range 1.0 to 12.0 cm²). All defects were classified as grade III (n=20) to IV (n=37) according to the Outerbridge classification. Defects were localized at the medial (n=32) or lateral (n=6) condyle, at the trochlea (n=4) and at the patella (n=15). The followup period was 24 months. The majority of patients was satisfied with the postoperative outcome, reporting a significant decrease of pain (VAS preop.=7.0, 1 year postop.=2.9, 2 years postop.=2.0). Significant improvement of the Lysholm score was observed as early as 12 months after AMIC and further increased values were notable up to 24 months postoperatively (preop. 55, 1 year postop. 89, 2 year postop. 91).

Conclusions: AMIC is an effective and safe method of treating symptomatic chondral defects of the knee. However, further studies with long-term follow-up are needed to determine if the grafted area will maintain structural and functional integrity over time.