Early results of Autologous Matrix-Induced Chondrogenesis (AMIC) & Chondro-gide matrix procedure in Osteochondral lesions of talus

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Osteochondral lesion (OCL) Talus

- Injury of talar articular cartilage & adjacent bone
- Osteochondral injuries of talus - 1% of body injuries
- Etiologic factor – trauma in 93-98% for lateral defects & 61-70% for medial defects

Purpose

A case series of five patients who underwent ankle arthroscopy & AMIC (Autologous Matrix Induced Chondrogenesis) with Chondro-gide matrix & fibrin glue for osteochondral lesions of talus
Materials and Methods

- **Study Design**: Prospective case series

- **Study Population**: Five patients diagnosed with osteochondral injuries of talus on preoperative MRI

- **Injuries classified according to Berndt & Harty classification.**
Materials and methods

Inclusion criteria –

• Skeletally mature individuals with focal traumatic chondral/osteochondral defects of size >1 cm²

Exclusion Criteria-

• Patients with metabolic arthropathies, major non-reconstructable defects, non-correctable axial mal-alignments, chronic inflammatory systemic disorders.
Materials and methods

- Preoperative & postoperative American orthopaedic foot and ankle scores (AOFAS)

- Weight-bearing ankle radiographs and MRI were done in all patients

- Intervention- Ankle arthroscopy & AMIC (Autologous Matrix Induced Chondrogenesis) with Chondro-gide matrix & fibrin glue
AMIC

- Single step procedure (Geistlich Surgery, Switzerland)

- Combines Microfracture with application of Chondro-gide, a porcine collagen type I/III matrix & fibrin glue application

- Chondro-gide – Scaffold that enhances chondrogenic differentiation of mesenchymal stem cells
• Any associated lateral ligament laxity - Simultaneous Modified Brostrum-Gould Procedure done

• Preoperative & postoperative American Orthopaedic Foot &Ankle Scoring (AOFAS)

• Follow up- Six months

• Standard Post-op protocol – non weight bearing for 6 weeks followed by increasing weight bearing
Results

- 3 males, 2 females (Total 5)
- Average age - 52.4 years
- Average Pre-op AOFAS score of 51, improved to post-op score of 78 at six months.
Conclusion

- Our case series show AMIC with Chondro-gide matrix procedure for >1 cm² osteochondral lesions of talus is a one-step surgical technique with encouraging results.