The Effect of Curettage and Bone Graft for Very Large Cystic Osteochondral Lesion of Talus

Myong-Jin Kim, MD, Chi-Young Ahn, MD, Yoon-Chung Kim, MD and Jae Hoon Ahn, MD

Department of Orthopaedic Surgery
Seoul St. Mary’s Hospital
The Catholic University of Korea College of Med.
NO CONFLICT TO DISCLOSE

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Our disclosure is in the Final AOFAS Mobile App. We have no potential conflicts with this presentation.
Introduction

• Limitation of A/S bone marrow stimulation for OLT
  – Technically impossible in case of very large cystic OLT

• OATS and ACI are another treatment options to yield good results in cases of large cystic OLT.
  – Shortcomings of these procedures are the need of invasive surgery to the normal knee joint (OATS) and the need of two-staged procedures (ACI).

• Effect of BG for cystic OLT? (Draper, 2000 / Saxena, 2007)
Purpose of Study

• To investigate the effect of open curettage and bone grafting for the large cystic osteochondral lesion of talus with clinical and radiological analysis
MATERIALS & METHODS

Demographics
Feb., 2005 ~ Dec., 2010
17 cases (M : F = 14 : 3)
Age : 16 ~ 54Y (mean 42.4Y)
F/U : 24 ~ 67M (mean 37M)

Inclusion criteria
Large cystic OLT > 150 mm² on MRI
Treated with curettage and bone graft
No definite OA changes
MATERIALS & METHODS

Clinically
- VAS
- AOFAS ankle-HF scale
- Patients’ satisfaction
- PO complication

Radiologically (MRI)
- Size & volume of OLT

Arthroscopically
- 14/17 cases (2nd look AS)
- ICRS grading of repaired cartilage
Op. Technique

• Ankle AS → Open exposure of OLT with malleolar osteotomy

• Curettage & bone graft
  – Morselized autograft + cancellous allograft

• Fixation of MM with two to three 4.0 mm cannulated screws

• PO NWB short leg cast for 6W
RESULTS

Clinically
- VAS: 6.9 → 1.8
- AOFAS: 51.2 → 86.3
- 15/17 (88%) satisfied
  - 2 cases: not satisfied d/t persistent pain
- No wound problem or NU of osteotomy

Radiologically
- Size: mean 160 mm$^2$
- Volume: 11.5 x 17.8 x 12.1 mm$^3$

Arthroscopically (14/17)
- ICRS grade
  - II (nearly normal): 5 (36%)
  - III (abnormal): 9 (64%)
DISCUSSION

• The management of OLT is controversial.
  – Zengerink (2010): 85% success with BM stimulation

• Ideal treatment for large cystic OLT?
  – AS BMS with limited results → OATS (Scranton, 2006)
  – Jung (2011): 86% satisfaction with AS in cystic OLT
    with median lesion size of 76 mm² (measured by AS)

• BG for cystic OLT: better results than excision only
  – Greenspoon (JPO, 1987), Draper (JFAS, 2000)
DISCUSSION

- **Saxena (AJSM, 2007)** compared RTA for athletes
  - MF for Hepple stage II~IV ↔ BG for V lesion
  - Bone grafting required a longer time to return to activity than microfracture in high-demand patients.
  - Both groups had similar PO AOFAS scores.
  - When applied to appropriate lesions, both techniques allow athletic patients to return to sports.

**Our study**
  - 88% of patients were satisfied with the results.
DISCUSSION

- Johnson (Cart, 2012) 12Y FU after BG into Knee
  - Autogenous bone grafting provides a matrix for large osteochondral defects that integrates with the host bone
  - BG results in a surface repair of fibrocartilage and hyaline cartilage that can endure for up to 20 years.
  - Salvage in nature, palliative in outcome

Our study

- Good results considering the size & severity (160 mm²)
- Salvage procedure: 5/14 (36%) near normal cartilage
REFERENCES

