

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

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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

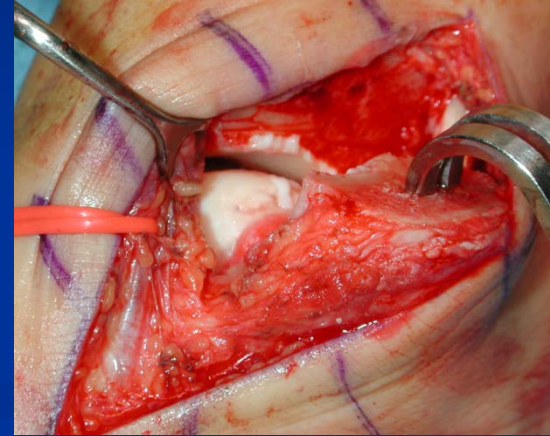
14/17 cases (2nd look AS)

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

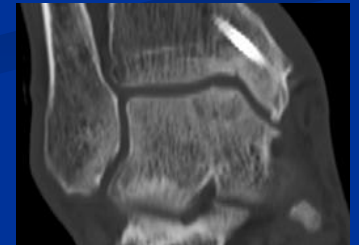
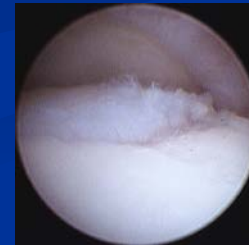
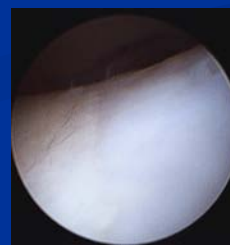
- VAS: 6.9 → 1.8
- AOFAS: 51.2 → 86.3
- 15/17 (88%) satisfied
 - 2 cases: not satisfied d/t persistent pain
- No wound problem or NU of osteotomy

Radiologically

- Size: mean 160 mm²
- Volume: 11.5 x 17.8 x 12.1 mm³

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

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3. Saxena A, Eakin C: Articular talar injuries in athletes: results of microfracture and autogenous bone graft. *Am J Sports Med.* 2007;35:1680-7.