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Return to Sport after Surgery for Osteochondral Lesions of the Talar Dome. Results of a Multicenter Prospective Study on 58 Patients

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Disclosure Information

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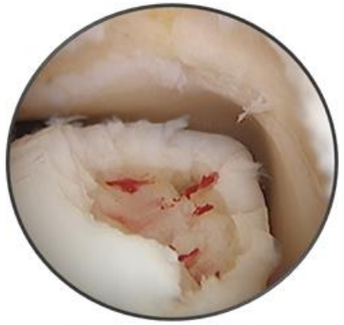
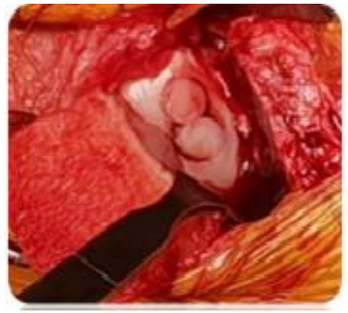
Background

- OLT often affects athletes.
- Main goal:
  return to sport at previous level.
- Literature:
  ↑ RTS (~90%)
  ↓ lacks high-level evidence.

- Two main surgical techniques:





Study Aim & Hypothesis

Primary aim:

To assess return to sport (RTS) after OLT surgery.

Secondary aim:

To identify predictors for RTS.

Hypothesis:

Surgery enables RTS in most patients.

Methods

- **Design:**
  - prospective
  - multicenter study (10 centers)
- **Period:**
  June 2018 – September 2019
- **Inclusion:**
  - symptomatic OLT
  - 18–65 y
  - failed medical therapy >6 months
- **Exclusion:**

- OA grade ≥2
- trauma
- prior surgery
- infection

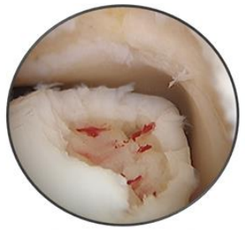
Overall series data.

Population	Overall ($n = 86$)	Non-sportive ($n = 28$)	Sportive ($n = 58$)
Sex ratio M/F	52/34	12/16	40/18
Smoking	11	5	6
Average age (min–max)	37 (18–62)	42 (18–61)	35 (18–62)
BMI	26 (14.8–39.6)	26.1 (14.8–35.8)	25.9 (18.9–39.6)
Preop AOFAS	55 (24–83)	51.1 (24–83)	57.1 (24–81)
Sporting level			
Professional	0	0	0
Competitive	15	0	15
Leisure	43	0	43
Lesions			
Stage 1	49	16	33
Stage 2	2	0	2
Stage 3	35	12	23
Preop bone bruise	40	19	21
Lesion location			
Medial	48	20	28
Central	2	1	1
Lateral	36	7	29

NA: non-applicable; NS: non-significant.

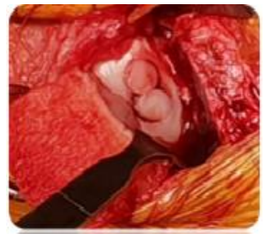
Surgical Procedures

Stage 1: Microfracture (49 patients)



Stage 2: Lift–Drill–Fill–Fix (2 patients)

Stage 3: Mosaicplasty (35 patients)



CT arthrographic classification system of osteochondral lesions of the talus.

	Maximum size	Maximum depth	Cartilage tear
Stage 1	<10mm AND <5mm	NU	
Stage 2	>10mm AND/OR >5mm	Absent	
Stage 3		Present	

NU: Not Useful

+ Ligament repair if instability present!

Results - Return to Sport

- RTS at same level: **70.6%**
- **Average delay:** 4.3 months
- Predictors of RTS:
  → **High preop AOFAS score (p = 0.02)**
  → **Stage 1 lesion (p = 0.006)**
- No difference competitive vs leisure

Results - Functional & Satisfaction

- **Postop AOFAS:** 86 (RTS group) vs. 76 (non-RTS)
- **Satisfaction:** 8 vs. 6 (p = 0.01)
- Delta AOFAS: similar in both groups
- No link between ligament repair and RTS

Comparison with Literature

RTS Rate (this study):

- Microperforation: ~85%
- Mosaicplasty: **56.5%** (vs. 86% in literature)

→ **Lower than expected** for mosaicplasty

Comparison of our results with the literature.

Technique	Series	Level of evidence	Number of studies	Number of patients	Age	Average follow-up (months)	Sport recovery rate (%)	Time to return to sport (months)
Microperforations	Hurley et al.	4	57	3072	36.9	46	86.8	4.5
	Lopes et al.	2	1	33	36.3	16.5	84.8	3.2
Osteochondral graft	Seow et al.	4	9	205	30.6	44.4	86.3	5.8
	Lopes et al.	2	1	23	32.7	14.6	56.5	4.15

Limitations & Discussion

- Short follow-up (mean 15.1 months)
- No psychological evaluation pre-RTS
- No pro athletes included
- RTS ≠ RTS at same level
- No data on sport type (pivot/contact etc.)

Conclusion

👍 OLT surgery allows RTS in ~70%

👍 Stage 1 lesions & higher preop AOFAS predict success

👎 Mosaicplasty less effective than expected

💡 Need for psychological & sport-specific assessments

💡 Standardized RTS protocols are critical

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Return to sport after surgery for osteochondral lesions of the talar dome. Results of a multicenter prospective study on 58 patients

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