Primary versus Non-Primary Arthroscopic BMS for OLT: A 2-Year Prospective Follow-Up Study

Quinten G.H. Rikken1,2,3, MD
Jari Dahmen1,2,3, MD, BSc
Julian J. Hollander1,2,3, BSc
Jason A.H. Steman1,2,3, MD
Sjoerd A.S. Stufkens1,2,3, MD, PhD
Gino M.M.J. Kerkhoffs1,2,3, MD, PhD
Work performed at the Department of Orthopaedic Surgery, Amsterdam UMC, Location AMC, Amsterdam, The Netherlands

1) Department of Orthopedic Surgery, Amsterdam Movement Sciences, Amsterdam UMC, Location AMC, University of Amsterdam, Meibergdreef 9, 1105 AZ Amsterdam, The Netherlands
2) Academic Center for Evidence based Sports medicine (ACES), Amsterdam UMC, Amsterdam, The Netherlands
3) Amsterdam Collaboration for Health and Safety in Sports (ACHSS), International Olympic Committee (IOC) Research Center, Amsterdam UMC, Amsterdam, The Netherlands

Background

Most frequent treatment for primary OLT

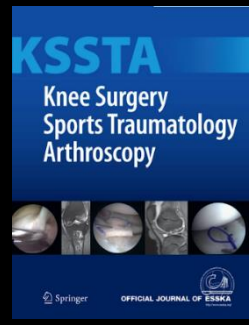
+ Good outcomes in 80%

+ Economical / technically feasible / less invasive

o Outcomes in Non-Primary OLT seems less favourable → clear evidence gap

No superior treatment for primary osteochondral defects of the talus

Jari Dahmen[1,2,3] · Kaj T. A. Lambers[1,2,3] · Mikel L. Reilingh[1,2,3] · Christiaan J. A. van Bergen[1,2,3,4] · Sjoerd. A. S. Stufkens[1,2,3] · Gino M. M. J. Kerkhoffs[1,2,3]

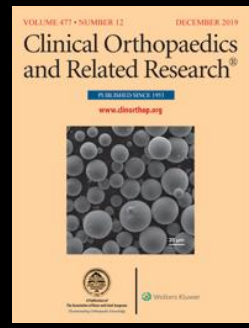


Satisfactory long-term clinical outcomes after bone marrow stimulation of osteochondral lesions of the talus

Quinten G. H. Rikken[1,2,3] · Jari Dahmen[1,2,3] · Sjoerd A. S. Stufkens[1,2,3] · Gino M. M. J. Kerkhoffs[1,2,3]

Should Arthroscopic Bone Marrow Stimulation Be Used in the Management of Secondary Osteochondral Lesions of the Talus? A Systematic Review

Arshad, Zaki BA Cantab[1]; Aslam, Aiman BA Cantab[1]; Iqbal, Adil M. BA Cantab[1]; Bhatia, Maneesh MBBS, MS(Orth), FRCS (Ed), FRCS (Tr&Orth)[2]



Evidence-based Treatment of Failed Primary Osteochondral Lesions of the Talus: A Systematic Review on Clinical Outcomes of Bone Marrow Stimulation

Jari Dahmen[1,2,3], Eoghan T. Hurley[4,5], Yoshiharu Shimozono[4,6], Christopher D. Murawski[7], Sjoerd A. S. Stufkens[1,2,3], Gino M. M. J. Kerkhoffs[1,2,3], and John G. Kennedy[4]

Background

QGH Rikken reports editorial team membership at JEO journal and editorial board membership at Arthroscopy journal

J Dahmen reports editorial team membership at CARTILAGE journal

Aims

Primary Aim
to assess the PROMs of non-primary bone marrow stimulation (BMS) for osteochondral lesion of the talus (OLT) and to compare these with primary cases at 2-year follow-up.

Secondary Aim
to assess the association of baseline factors with outcomes and the occurrence of the adverse events.

Patient Characteristics

	Primary Group (n=25)	**Non-Primary Group** (n=19)
Male	10 (40%)	12 (63%)
Age	26 (19 – 37)	28 (24 – 34)
BMI	24 (22 – 25)	24 (21 – 27)
Trauma	82%	69%
Additional procedures	56%	53%
No. previous OLT surgeries		1 (1 – 2) mostly previous BMS

P > 0.05 for all

Lesions Characteristics

Morphology	**Primary Group**	**Non-Primary Group**
Cystic	9 (36%)	4 (21%)
Crater	6 (24%)	12 (63%)
Fragment (non-fixable)	10 (40%)	3 (16%)

P = 0.03

Size		
Area (mm^2)	77 (51 – 114)	78 (66 – 123)
Depth	6 (5 – 8)	5 (4 – 6)

P > 0.05 for all

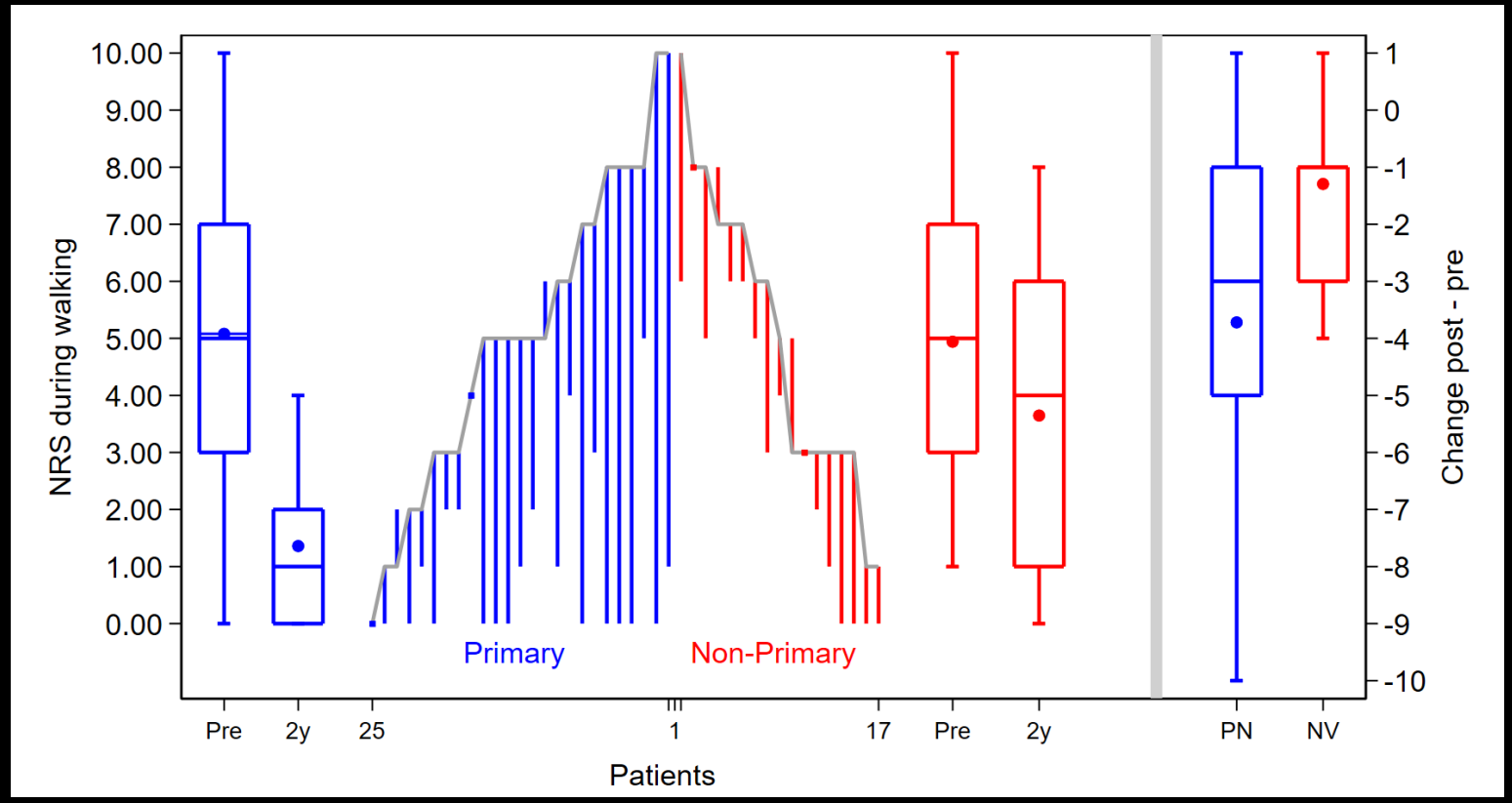
Primary Outcome

Improvement

Primary Group
3 (IQR: 1 – 5) points

Non-Primary Group
1 (IQR: 1 – 3) points

P= 0.01



Discussion

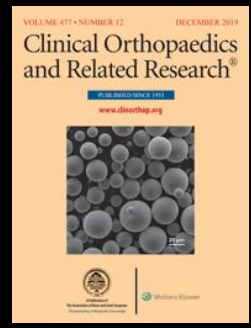
Findings support consensus that BMS for non-primary OLT results in a limited improvement in patient-reported outcomes

Previous literature quality: poor

Baseline factors:
Literature: lesion size
This study: none identified

Should Arthroscopic Bone Marrow Stimulation Be Used in the Management of Secondary Osteochondral Lesions of the Talus? A Systematic Review

Arshad, Zaki BA Cantab[1]; Aslam, Aiman BA Cantab[1]; Iqbal, Adil M. BA Cantab[1]; Bhatia, Maneesh MBBS, MS(Orth), FRCS (Ed), FRCS (Tr&Orth)[2]



Evidence-based Treatment of Failed Primary Osteochondral Lesions of the Talus: A Systematic Review on Clinical Outcomes of Bone Marrow Stimulation

Jari Dahmen[1,2,3], Eoghan T. Hurley[4,5], Yoshiharu Shimozono[4,6], Christopher D. Murawski[7], Sjoerd A. S. Stufkens[1,2,3], Gino M. M. J. Kerkhoffs[1,2,3], and John G. Kennedy[4]

Take To Work

Non-primary BMS yields a significant improvement in PROMs compared to baseline, but an inferior improvement compared to primary BMS at 2-years follow-up

The indication can be embedded in shared-decision making, but patient expectation management is crucial

Thank You!