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Platelet-rich plasma or hyaluronate in the management of osteochondral lesions of the talus.

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Abstract

BACKGROUND: Nonoperative options for osteochondral lesions (OCLs) of the talar dome are limited, and currently, there is a lack of scientific evidence to guide management.

PURPOSE: To evaluate the short-term efficacy and safety of platelet-rich plasma (PRP) compared with hyaluronic acid (HA) in reducing pain and disability caused by OCLs of the ankle.

STUDY DESIGN: Randomized controlled trial; Level of evidence, 2.

METHODS: Thirty-two patients aged 18 to 60 years were allocated to a treatment by intra-articular injections of either HA (group 1) or PRP (plasma rich in growth factors [PRGF] technique, group 2) for OCLs of the talus. Thirty OCLs, 15 per arm, received 3 consecutive intra-articular therapeutic injections and were followed for 28 weeks. The efficacy of the injections in reducing pain and improving function was assessed at each visit using the American Orthopaedic Foot and Ankle Society (AOFAS) Ankle-Hindfoot Scale (AHFS); a visual analog scale (VAS) for pain, stiffness, and function; and the subjective global function score.

RESULTS: The majority of patients were men ($n = 23$; 79%). The AHFS score improved from 66 and 68 to 78 and 92 in groups 1 and 2, respectively, from baseline to week 28 ($P < .0001$), favoring PRP ($P < .05$). Mean VAS scores (1 = asymptomatic, 10 = severe symptoms) decreased for pain (group 1: 5.6 to 3.1; group 2: 4.1 to 0.9), stiffness (group 1: 5.1 to 2.9; group 2: 5.0 to 0.8), and function (group 1: 5.8 to 3.5; group 2: 4.7 to 0.8) from baseline to week 28 ($P < .0001$), favoring PRP ($P < .05$ for stiffness, $P < .01$ for function, $P > .05$ for pain). Subjective global function scores, reported on a scale from 0 to 100 (with 100 representing healthy, preinjury function) improved from 56 and 58 at baseline to 73 and 91 by week 28 for groups 1 and 2, respectively ($P < .01$ in favor of PRP).

CONCLUSION: Osteochondral lesions of the ankle treated with intra-articular injections of PRP and HA resulted in a decrease in pain scores and an increase in function for at least 6 months, with minimal adverse events. Platelet-rich plasma treatment led to a significantly better outcome than HA.

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