

Raeissadat SA, Ghorbani E, Sanei Taheri M, et al. **MRI Changes After Platelet Rich Plasma Injection in Knee Osteoarthritis (Randomized Clinical Trial)**. J Pain Res. 2020 Jan 10;13:65-73. doi: 10.2147/JPR.S204788. eCollection 2020. (Original study)

Abstract

Purpose: Few papers have studied the objective effects of PRP on cartilage. In this study, we investigated the effect of PRP on cartilage characteristics by special MRI sequencing in knee osteoarthritis (IRCT registration number: 2014020413442N6).

Patients and methods: In this double blind randomized clinical trial, patients with bilateral knees osteoarthritis-grade 1, 2, and 3 were included in the study. Each patient's knees were randomly allocated to either control or treatment groups. PRP was injected in two sessions with 4 week intervals in PRP group. The VAS (visual analog scale) and WOMAC (Western Ontario and McMaster Universities Arthritis Index) were utilized and MRI was performed for all patients, before, and 8 months after treatment. The MRI sequences taken were transverse 3D TRUFISP and coronal and sagittal fat saturated proton-density. Imaging was scored according to four cartilage characteristics.

Results: 46 knees (from 23 patients) were included in this study. 23 knees in the case group and 23 knees in control group were studied. All patients were female with mean age of 57.57±5.9 years. Mean total WOMAC and VAS changes before and after treatment in control group were 11.61±8.5 and 1.3±1.1 respectively. In PRP group, mean total WOMAC and VAS changes showed better improvement with 20±12.3 and 3.2±1.6 respectively (P-value <0.05). In PRP group, all of the radiologic variables (patellofemoral cartilage volume, synovitis and medial and lateral meniscal disintegrity), with the exception of subarticular bone marrow abnormality, had significant improvement (P-value <0.05). In a comparison between the two groups, patellofemoral cartilage volume and synovitis had significantly changed in the PRP group (P-value <0.05).

Conclusion: In this study, in addition to the effect of PRP on VAS and WOMAC, there was a significant effect on radiologic characteristics (patellofemoral cartilage volume and synovitis). For further evaluation, a longer study with a larger sample size is recommended.

Ratings

Discipline Area	Relevance to Practice	Is this News?
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This very interesting study proves the benefit of PRP with clinically subjective outcome and MRI-based outcome.

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