

PLATELET-RICH PLASMA INJECTIONS

FOR LUMBAR DEGENERATIVE MONODISCOMPATY: A PILOT STUDY

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Objective:

This longitudinal pilot study aimed to evaluate the feasibility, safety, and potential benefits of platelet-rich plasma (PRP) injections into lumbar intervertebral discs in patients with chronic low back pain and degenerative monodiscopathy, assessing potential efficacy on disability.

Results:

No adverse events were reported. At 1 year, 50% of participants showed significant improvements in disability scores (RMDQ), while the remaining 50% experienced no change. Pain (NRS) and kinesiophobia (TSK) scores showed no consistent pattern of improvement across the cohort. MRI analysis revealed no significant changes in intervertebral disc morphology.

Conclusion:

PRP injections may offer potential benefits for selected patients with degenerative lumbar intervertebral discopathy and low back pain, particularly in reducing disability. However, the findings are limited by the small sample size and absence of a control group. Further research with larger, randomized controlled trials is needed to establish efficacy and optimize PRP therapy protocols for this population.

Material and Methods:

Six participants with chronic low back pain and lumbar degenerative intervertebral disc disease underwent a single PRP injection into the affected lumbar intervertebral disc. Follow-up assessments were conducted over 1 year. Outcomes included the Roland Morris Disability Questionnaire (RMDQ) for disability, numeric rating scale (NRS) for pain, Tampa Scale for Kinesiophobia (TSK), and lumbar flexion range of motion. Magnetic resonance imaging (MRI) was used to evaluate disc structural changes.

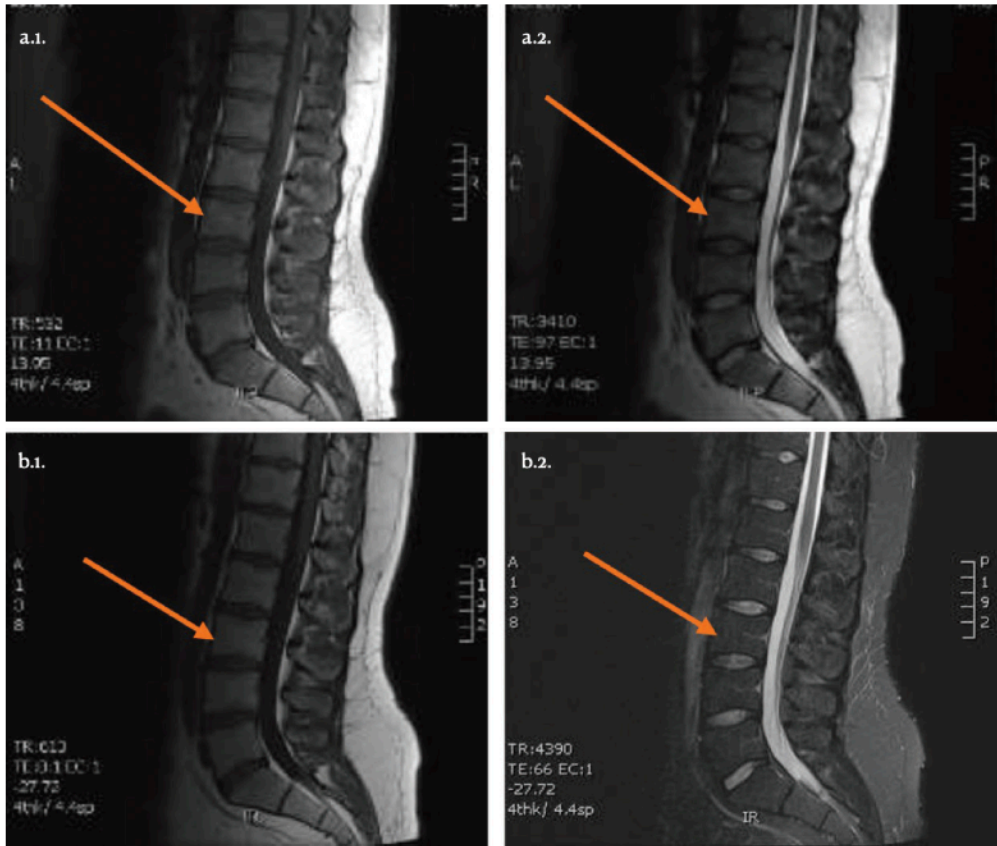


Fig. 2. MRI sagittal sections of patient 3, before PRP injection (a.1. T1 sequence; a.2. T2 sequence) and at 12 months post-injection (b.1. T1 sequence; b.2. T2 sequence).

Table I. Patients' information. Physically active = engaging in regular physical activity

	Gender (M/F)	Age (years)	Physically active (Y/N)	Pain duration (years)	Degenerated disk	PRP injected volume (mL)
Patient 1	M	44	Y	10	L4-L5	3
Patient 2	M	45	N	3	L4-L5	3
Patient 3	M	34	N	2	L3-L4	2.5
Patient 4	M	38	Y	8	L4-L5	3
Patient 5	F	58	N	15	L4-L5	3.5
Patient 6	F	40	Y	3	L4-L5	2.5

Table II. Patients' follow-up

	RMDQ (0-24)			Pain (0-10)			Tampa scale (17-68)			Lumbar flexion (degrees)		
	Pre	1 year	MCID≥3 (Y/N)	Pre	1 year	MCID≥2 (Y/N)	Pre	1 year	MCID≥6 (Y/N)	Pre	1 year	MCID≥10° (Y/N)
Patient 1	11	12	N	5	3	Y	55	44	Y	49	31	N
Patient 2	13	4	Y	6	0	Y	55	54	N	41	31	N
Patient 3	12	2	Y	5	3	Y	36	20	Y	12	30	Y
Patient 4	14	3	Y	7	5	Y	38	36	N	51	45	N
Patient 5	18	16	N	6	5	N	56	53	N	12	26	Y
Patient 6	9	9	N	3	3	N	38	34	N	30	37	N
Mean	12.8	7.7		5.3	3.2		46.3	40.2		32.5	32.5	
SD	2.8	5.6		1.4	1.8		9.9	12.9		17.5	6.7	
t-Test	0.067			0.048			0.052			0.892		

RMDQ: Roland-Morris Disability Questionnaire; MCID: minimal clinically important difference.

Reference:

Kaux JF et al.. EXPLORING THE FEASIBILITY OF PLATELET-RICH PLASMA INJECTIONS FOR INTERVERTEBRAL DISCOMPATY: A PILOT STUDY. J Rehabil Med Clin Commun. 2024 Oct 16;7:18305.

Disclosure:

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