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Comparison of effectiveness between intra-articular PRF and ICI on cervical facet joint pain

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Objective

To compare therapeutic effect of intra-articular pulsed radiofrequency and intra-articular steroid injection on cervical facet joint pain

Methods

Patients with cervical facet joint pain who feels pain more than 5 points with Visual Analogue Scale(VAS) score and radiologically diagnosed were recruited at outpatient clinic. The patients were assessed with VAS score, radiologic evaluation, functional measurements at initial visit and therapeutic outcome was assessed using VAS score after 3rd, 6th months treatment. The Successful treatment was defined as more than 50% reduction in the VAS score at 6 months compared with the pre-treatment VAS score. * Validation : the degree of change in pain reduction (change in VAS [%] = [pretreatment score - scores at 8 months after treatment] / pretreatment score × 100)

Results

The mean age of patients was 58 years old, mean morbidity period was 13 months and mean pain symptom was evaluated VAS 6.1 (table 1) The patients were divided in two groups with randomized manner and patient group A received pulsed radiofrequency intra-articular injection and patient group B received steroid intra-articular injection three times and each injection was performed 3 months intervals. There were therapeutic improvement in both group A and B patient after 3rd month visits. VAS scores are both decreased in both group A and B. But, At 6th month visit group A patients VAS scores showed sustained decrease but patients in group B VAS and WOMAC scores were risen after 6th month assessment.

Conclusions

PRF group is as effective as ICI to improve pain symptoms and functional outcomes. PRF group showed sustained effect on hemiplegic shoulder pain on long-term follow up in our study. Table 1. General feature statistics Note : Values represent the mean ± standard deviation. Abbreviations : ICI : intra-articular corticosteroid injection; PRF : pulsed radiofrequency; HSP : Hemiplegic shoulder pain; MMT : Manual muscle test; LOM : Limitation of passive range of motion; VAS : Visual analog scale; FAC(Functional ambulationi categories), MBC(Modified brunnstorm classification) Table 2. Clinical

outcomes after 3 months, 6 months for two groups Note : Values represent the mean \pm standard deviation. Abbreviations : Int. : Internal ; Ext. : External

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Characteristics		Baseline group	P-value(ICI&PRF*)	
Total	Age, years	57.95 \pm 8.7	0.472	
	Sex(M:F)	9:11	-	
	Months from HSP* onset	13.2 \pm 2.6	0.607	
	Stroke type (infarction : hemorrhage)	9:11	-	
	Involved side, right : left	10:10	-	
	MMSE	27.5 \pm 2.6	0.533	
	MBC	2.3 \pm 0.9	0.814	
	FAC	2.4 \pm 0.5	1.0	
	MMT*	Shoulder	1.9 \pm 0.6	0.512
		Elbow	2.6 \pm 0.6	0.269
		Finger	1.6 \pm 0.9	0.677
		Hip	2.0 \pm 0.6	1.0
		Knee	2.7 \pm 0.6	0.471
		Ankle	1.6 \pm 0.8	0.280
	Initial LOM* of shoulder	41.00 \pm 25.55	-	
	Flexion	Flexion	55.3 \pm 26.4	0.100
		Abduction	58.3 \pm 26.7	0.490
		External rotation	31.5 \pm 10.9	0.297
Internal rotation		21.8 \pm 7.3	0.121	
Initial pain, VAS*	6.1 \pm 1.2	0.385		

table2. Clinical outcomes after 3 months, 6 months for two groups Note : Values represent the mean \pm standard deviation. Abbreviations : Int. : Internal ; Ext. : External

		P-Value
Difference	Δ VAS, pain	0.064
	Δ Passive ROM	
	Flexion	0.479
	Abduction	0.596
	Ext. Rotation	0.089
	Int. Rotation	0.077