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The efficacy of adjuvant PDRN intra-articular injection on knee OA compared to HA

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Objective

To compare the therapeutic effects of adjuvant polydeoxyribonucleotide(PDRN) and hyaluronic acid(HA) with each intra-articular injection on knee osteoarthritis.

Methods

Patients with osteoarthritis who feels pain more than 5 points with VAS score and radiologically diagnosed(K-L grade 2~3) were recruited at outpatient clinic. The patients were assessed with Visual Analogue Scale (VAS) score, radiologic evaluation, and Western Ontario and McMaster Universities (WOMAC) score at initial visit and therapeutic outcomes were assessed using VAS score, WOMAC score after 1st, 3rd months treatment. Intra-articular injection procedures were performed under aseptic maneuver(sterilize with povidone-iodine solution, use aseptic drape and glove), and approached superolaterally with knee fully extended.

Results

The mean age of patients was 67 years old, mean morbidity period was 17 months and mean BMI was 26. (table 1) The patients were divided in two groups with randomized manner and patient group A received PDRN and HA intra-articular injection and patient group B received HA intra-articular injection three times and each injection was performed 1 week interval. There were therapeutic improvement in both group A and B patient after 1st month visits. VAS and WOMAC scores are both decreased in both group A and B. At 3rd month visit group A patients VAS and WOMAC scores showed sustained decrease but patients in group B VAS and WOMAC scores were risen after 1st month assessment. The reduction in pain and functional outcome were statistically significant for both groups.

Conclusions

Adjuvant PDRN is as effective as HA to improve knee osteoarthritis symptoms and functional outcome. Adjuvant PDRN showed sustained effect on knee osteoarthritis in our study.

Table 1. General feature statistics

		N (%)
Sex	Male	17 (42.5)
	Female	23 (57.5)
Age		67.2 ± 8.1 (years)
Morbidity period		17.3 ± 9.7 (months)
BMI		26.42 ± 1.81

Table 2. Clinical outcomes after 1month and 3months for two groups

Group	Clinical measures	Initial visit	1st month	3rd month
Group A(PDRN+HA)	VAS	7.03 ± 0.37	3.23 ± 0.20	2.31 ± 0.35
	WOMAC	50.12 ± 1.76	28.12 ± 1.47	26.37 ± 1.52
Group B(HA)	VAS	7.06 ± 0.33	3.38 ± 0.31	3.56 ± 0.38
	WOMAC	49.87 ± 1.52	31.20 ± 1.68	36.40 ± 1.60