P 1-119

Comparison of the Effectiveness of Triamcinolone Versus Dexamethasone on Osteoarthritis of the knee

Sang Chul Lee[1*], Yong Bum Park[1†], Jae Ki Ahn[1]

Inje University Sanggye Paik Hospital, Department of Rehabilitation Medicine[1]

Objective

This study is to compare the efficacy and side effects of intra-articular injection of Dexamethasone (DEX) in comparison with Triamcinolone (TA) in the treatment of knee joint inflammation in patients with knee osteoarthritis (OA) during 12 weeks after injection.

Design

49 patients with knee OA were enrolled and randomly assigned to either the DEX (n=19) or TA (n=30) group. The treatment effects estimated as visual analog scale (VAS) and Lequesne index were compared in 2,4 and 12 weeks after the procedures.

Results

VAS and Lequesne index improved 2, 4 and 12 weeks after the injections in both groups. Statistical differences were not observed in VNS, ODI, or in the effectiveness of the procedure between the groups except after 2 weeks. There were significant better improvement in VAS in 2, 4 weeks after injecton and Lequesne index at TA group in 2 week after injection ($P < 0.05$) Logistic regression analysis demonstrated Method of injection (DEX or TA group), sex, use of analgesics, pain duration, number of injections, and age were not independent variables for successful treatment Results.

Conclusion

There were no siginificant difference in 12 weeks after the procedure in both groups. But. TA is a non-soluble drug that can cause many complications due to particles of TA and TA also have toxicity to chondrocyte as following recent investigates. So, we recommend use dexamathasone at intra-articular injection in patients with Knee OA

Table 1. Comparison of VAS and Lequesne index in each group (TA & DEX group) from baseline to 2, 4, and 12 weeks after the last injection.

		Baseline	2 weeks	4 weeks	12 weeks
VAS	TA	6.97 ± 1.124	3.49 ± 1.067*	2.60± 0.695*	2.40± 1.193*
	DEX	7.11 ± 1.207	4.83± 1.014*	3.09 ± 0.742*	2.60 ± 1.035*
Lequesne index	TA	11.51± 1.541	6.69±1.255*	4.20±1.232*	4.14±1.833*
	DEX	11.94± 1.626	7.89±1.132*	4.60±1.168*	4.34±1.514*

Values are presented as mean ± standard deviation for continuous data. *p< 0.05: Comparison of each variable at a specific time point with that of baseline. TA, triamcinolone; DEX, dexamethasone

Table 2. Multiple logistic regression analysis for possible outcome predictors of effectiveness in injection at follow-up.

Factor	OR	95% CI	p-value
DEX vs TA group	0.912	0.424-1.961	0.813
Sex	1.523	0.622-3.725	0.357
Age	1.012	0.976-1.050	0.511
NSAID	0.787	0.364-1.699	0.541
Pain duration	1.382	0.630-3.033	0.420

OR, odds ratio; CI, confidence interval; TA, triamcinolone; DEX, dexamethasone; NSAID, nonsteroidal anti-inflammatory drugs.

Table 3. Comparison of VAS and Lequesne index between TA & DEX group from baseline to 2, 4, and 12 weeks after the last injection.

TA vs Dexa (inter-group comparisone)	P-value	Mean difference
VAS(baseline)	0.610	-0.143
post 2wks	0.000*	-1.343
post 4wks	0.006*	-.486
post 12wks	0.456	-.200
Leq score(baseline)	0.262	-.429
post 2wks	0.000*	-1.200
post 4wks	0.168	-.400
post 12wks	0.620	-.200

***p< 0.05: TA group have significant better improvement as much as mean difference**
TA, triamcinolone; DEX, dexamethasone