

**LETTER TO THE EDITOR**

# Higher Rates of Achilles Tenotomy after a Didactic Session on Ponseti Method

**Dear Editor**

We have conducted a retrospective study to know the impact of a didactic session on the Ponseti method of clubfoot management. We have compared the outcome of patients managed by orthopaedic residents who attended such a session with that of patients treated by residents who didn't get this additional training. The results revealed that the frequency of PTA tenotomy was significantly higher in the additionally-trained group compared to the classically-trained group, which emphasises the role of regular such meetings.

About 80% of patients with clubfoot deformity belong to low and middle-income countries (1, 2). Several studies have indicated that there is a deviation from the Ponseti protocol among the practising physicians of these countries (3-5). One day training courses are carried out in many parts of the world by international organizations dealing with clubfoot to train Ponseti providers. Our institute organized such a seminar in November 2012. The study included clubfoot patients registered from November 2012 till June 2015, and treated by the nine resident doctors of our institute. These residents were equally experienced and had received classical training in the Ponseti technique, but only five of them had attended the seminar.

We have included the patients treated by the five residents who attended the seminar in the 'Additionally-trained group' and the remaining patients in the 'Classically-trained group'. However, we have excluded the patients who were managed by more than one resident, with less than nine months of follow-up and whose parents were not willing for a re-evaluation. Finally, out of 134 patients, 64 patients classified the selection criteria, with 41 patients (60 feet) in the additionally-trained group and 23 patients (33 feet) in the classically-trained group. Next, we re-evaluated the patients and took a detailed

treatment history. We obtained the demographic data and treatment-related information of patients from the departmental records. We have used the statistical software Stata 14.0 to analyse the data, and have considered a *P-value* of less than 0.05 as statistically significant.

Both the groups were similar concerning their demographic characteristics and prognostic determinants like age, gender, Pirani score at presentation, the proportion of syndromic and neurogenic clubfoot and compliance to FAB. The mean duration of cast phase in the additionally-trained group was 10.5 weeks, and that in the classically-trained group was 9.4 weeks ( $P=0.27$ ). The additionally-trained group conducted PTA tenotomy in 73.3% (44/60) of feet, which parallels with the 70-90% rate suggested in the literature (6). However, in the classically-trained group, only 51.5% (17/33) feet underwent PTA tenotomy. This difference in the rate of PTA tenotomy was statistically significant ( $P=0.03$ ).

From this study we can conclude that a one-day training programme successfully increases the confidence of the trainees to perform a PTA tenotomy. The higher rates of Achilles tenotomy after a didactic session on the Ponseti method is encouraging and indicates the importance of regular such meetings.

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**Table 1. Demographic characteristics and prognostic determinants of study participants**

Characteristic		Total (N= 64 patients, 93 feet)	Classically trained group		P-value
			(N= 41 patients, 60 feet)	N = 23 patients, 33 feet)	
Age at presentation (Days);	Mean ± standard deviation	77.4 ± 115.5	64.3 ± 113.4	110.8 ± 117.8	0.23
Age at presentation (Days)	Range	1-624	1-624	8-362	
Male: female (% male)		44:20 (68.8 %)	26:15 (63.4 %)	18:5 (78.2 %)	0.22
Unilateral: bilateral (% bilateral)		35:29 (45.3 %)	22:19 (46.3 %)	13:10 (43.4 %)	0.82
Idiopathic: Non-idiopathic (% Idiopathic)		59:5 (92.2%)	38:3 (92.7%)	21:2 (91.3%)	0.84
Foot abduction brace (FAB) compliant feet: FAB non-compliant feet (% Compliant)		49:44 (52.7%)	32:28 (53.3%)	17:16 (51.5%)	0.87
Initial Pirani score	Mean ± standard deviation	5.5 ± 0.84	5.5 ± 0.8	5.6 ± 0.8	0.78
	Range	3-6	3-6	3-6	

**Table 2. Comparative evaluation outcome variables between the study groups**

Outcome characteristics		Classically trained group		Total (N= 64 patients, 93 feet)	P-value
		(N= 41 patients 60 feet)	(N = 23 patients, 33 feet)		
Duration of follow-up (in months)	Mean ± standard deviation	22.1 ± 3.4	21.5 ± 5.9	21.9 ± 4.4	0.58
	Range	17-31	10-30	10-31	
Duration of Cast phase (in weeks)	Mean ± standard deviation	10.5 ± 5.5	9.4 ± 3.4	10.12 ± 4.9	0.27
	Range	4-32	2-16	2-32	
Total number of Cast	Mean ± standard deviation	8.4 ± 4.0	8.2 ± 3.0	8.3 ± 3.6	0.77
	Range	3-19	2-14	2-19	
Final Pirani score noted before application of Foot Abduction Brace	Mean ± standard deviation	0.4 ± 1.1	0.3 ± 0.7	0.4 ± 0.9	0.81
	Range	0-4	0-3	0-4	
Follow up Pirani score	Mean ± standard deviation	0.9 ± 1.1	0.9 ± 1.0	0.9 ± 1.1	0.99
	Range	0-4	0-4	0-4	
Successful: Relapse: Resistant (% success)		21:31:8 (35%)	13:12:8 (39.4%)	34: 43: 16 (36.6%)	0.26
Number of feet with (percutaneous tendo-achilis ) PTA tenotomy (%)		44 (73.3%)	17(51.5%)	61 (65.6)	0.03

## References

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