

[O03] HOW TO IMPROVE THE OUTCOME OF CHARCOT FOOT? – RESULTS OF 5 YEARS FOLLOW UP – PROSPECTIVE STUDY

Mohamed Motawea¹, Fady Kyrrillos², Ahmed Albehairy², Ahmed Hanafy²

¹Alkhafji National Hospital, Internal Medicine, Khafji, Saudi Arabia

²Diabetic Foot Clinic - Specialized Medical Hospital - Faculty of Medicine - Mansoura University, Mansoura, Egypt

Aim: Study the impact of nullification of the suggested risk factors responsible on better outcome of Charcot neuroosteoarthropathy (CN), and its contralateral foot (CF).

Method: Prospective analysis of the impact of compliance with the nullified suggested risk factors on both feet as 1. Compliance with the removable-cast-walker (RCW), 2. Compliance with the regular follow-up visits, 3. Nullified leg-length-discrepancy induced by the high rigid outsole of the RCW, and 4. slowing of the gait speed (24 steps ± 3/min). 43 Patients presented ≥5 years ago with unilateral CN and normal CF were included and subdivided into (Group A) compliant with all nullified risk factors and (Group B) non-compliant with ≥1 of the nullified risk factors, of matched age, sex and BMI, and with no statistically significant difference regarding HbA1c and diabetes duration in between. Both feet are then examined for any complications happened since January 2010 till February 2016.

Results/Discussion: ≥5 years ago, the CN foot showed no significant difference between both groups regarding the history of ulceration 28%(n=5) vs 44%(n=11), recurrent ulceration 11%(n=2) vs 12.5%(n=3), deformity 66.7%(n=12) vs 68%(n=17), ulcer/deformity relationship 80%(n=4) vs 44.4%(n=4) of the ulcers were related to the foot deformity, and minor amputation 16.7%(n=3) vs 16%(n=4), in group A vs group B respectively, p value in all was > 0.05, as shown in table 1. After ≥5 years, 5.6%(n=1) vs 20%(n=5) in CN foot, and 0% vs 20%(n=5) in the CF have new ulcers, 5.6%(n=1) vs 28%(n=7) in CN foot, and 11%(n=2) vs 4%(n=1) in the CF have new deformity, 0% vs 4%(n=1) in CN foot, and 5.6%(n=1) vs 4%(n=1) in the CF have minor amputation, and 16.7%(n=3) vs 24%(n=6) in the CF developed CN, in group A vs group B respectively, as shown in table 2. In summary, there is statistically significant difference regarding the complications happened in the CN foot, 11.1%(n=2) vs 44%(n=11) and in the CF, 16.7%(n=3) vs 48%(n=12) in group A vs group B respectively, (p<0.05 in both). Logistic regression analysis for prediction of occurrence of complications reveals that the adherence to nullification of these risk factors decreases the risk of occurrence of complications by >6 folds in the CN foot (odds ratio 6.3, p=0.03) and >4 folds in the CF (odds ratio 4.6, p=0.04).

Conclusion: Nullification of leg-length-discrepancy, slowing of the gait speed, compliance with the RCW and regular follow up visits greatly improved the outcome of patients with CN in Mansoura Foot clinic.

Table 1: Comparison between compliant and non-compliant groups 5 years ago (1st presentation)

	The Charcot foot				
	History of Ulceration	Presence of deformity	Minor amputation	Recurrent ulceration	Ulcer/deformity relationship
Group.A (n=18)	28%(n=5)	66.7%(n=12)	16.7%(n=3)	11%(n=2)	80%(n=4)
Group.B (n=25)	44%(n=11)	68%(n=17)	16%(n=4)	12.5%(n=3)	44.4%(n=4)
p-value	0.22	0.59	0.63	0.64	0.24

Table 2: Comparison between compliant and non-compliant groups after 5 years duration

	The Charcot foot			The Contralateral foot			
	New Ulcers	New Deformity	New Minor amputation	Ulcers	Deformity	Minor amputation	Charcot
Group.A (n=18)	5.6% (n=1)	5.6% (n=1)	0% (n=0)	0% (n=0)	11% (n=2)	5.6% (n=1)	16.7% (n=3)
Group.B (n=25)	20% (n=5)	28% (n=7)	4% (n=1)	20% (n=5)	4% (n=1)	4% (n=1)	24% (n=6)
p-value	0.02			0.034			