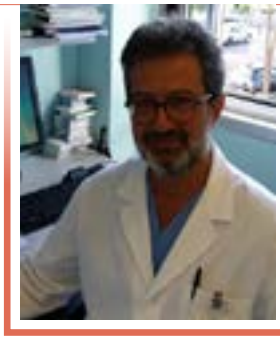
20 YEARS OF EXCELLENCE IN INTERNATIONAL MEETINGS
alliedacademies.com

Maurizio Falso, J ortho Rehab Surg. 2019, Volume 3
DOI: 10.4066/2630-4473-C1-001



Maurizio Falso

Fondazione Madonna del Corlo, Italy

BIOGRAPHY

Maurizio Falso received his Degree of Medicine in 1999 and his specialization in Physical Medicine and Rehabilitation from the University of Medicine of Verona, Italy in 2004 followed by a post-specialization research on the management of spasticity and movement disorders at the Department of Neurological Sciences and Vision of the University of Verona, Italy by using botulinum toxin and baclofen pumps and analyzing motor patterns with video-surface EMG. He is a Professor at the Physiotherapist School of the Medicine University of Brescia, Italy and a past-member of the Italian Consensus Table on the use of xeomin in adult spasticity. In his career he also promoted the use of innovative dynamic carbon-kevlar custom made AFO (DAFONS), innovative postural devices in patients affected by neurological complex postural needs, the device treatment of idiopathic scoliosis by using an innovative dynamic spine brace called "BRIXIA" and the device treatment of gait disorders by using an innovative dynamic carbon kevlar foot insole called "PRODYNAMIC".

falsomaurizio@libero.it

HOW DOES A PERSONALIZED REHABILITATIVE MODEL INFLUENCE THE FUNCTIONAL RESPONSE OF DIFFERENT ANKLE FOOT ORTHOSES IN A COHORT OF PATIENTS AFFECTED BY NEUROLOGICAL GAIT PATTERN?

Five patients affected by different neurological gait pattern and volunteered to participate to this study were recruited. The comparative spatio-temporal and functional effect on gait pattern of 3 types of AFOs was investigated under 4 study conditions: without AFO or Free-Walk (FW); wearing a Codivilla spring; wearing a carbon unjointed AFO ("Toe-Off"); wearing an innovative carbon-kevlar dynamic joint DAFO (DAFONS=Dynamic Ankle Foot Orthoses with Neuroswing). In line with our rehabilitative model, patients underwent to a weekly treatment session, 80 minutes duration per session, for 4 weeks. Evaluation was made before (time T3= time of recruitment) and after our individualized rehabilitative treatment course (time T4=1 month from T3) by using: G-Walk sensor (by BTS) spatio-temporal measures in different gait performances; clinical/functional outcome measures (Modified Ashworth Scale or MAS for the affected upper and lower limb; Medical Research Council or MRC; orthostatic stability evaluation by using the Berg Balance Scale or BBS). A statistical insignificant change of MRC and MAS scales at time T4, with a significance trend outcome observed at the same time by using the Wilcoxon Signed Rank Test; a statistical significant difference between test duration (sec) by using Toe-Off vs DAFONS and by using Codivilla spring

vs Toe-Off; a statistical significant increase of the stride length on the left side (% cycle length) by using DAFONS compared to Toe-Off for patient P1, P3 and P5 with a parameter decrease by using DAFONS compared to Codivilla spring and Toe-Off use for patient P2; a statistical significant correlation between BBS trend and test duration (sec) by using Codivilla spring at time T3 and T4; a statistical significant correlation between the BBS trend and the double gait support duration on the right side (% cycle) with number of left step cycles by using DAFONS at time T3 and T4; in a comparative post-treatment visual gait analysis a modification of each patient's static and dynamic postural assessment by using three different types of orthoses.

Note: