

## Influence of functional aquatic physiotherapy in the weight-bearing symmetry in the sit-to-stand transfer in hemiparetics after stroke

Joyce Xavier Muzzi de Gouvea, Daniela Ramos de Campos Magalhaes, Ilana Lafayette, Mariana Armando Lourenco, Valmir Marcos Baccaro and Douglas Martins Braga

Associacao de Assistencia a Crianca Deficiente, Brazil

One of the most executed movements is the Sit-To-Stand Transfer (SST), being a prerequisite for ensuring stability and mobility in standing posture. The objective of this study was to evaluate the influence of Functional Aquatic Physiotherapy (FAP) on Weight-Bearing (WB) symmetry between Lower Limbs (LL) in the SST in patients with post-stroke hemiparesis, and its interference in the activation of the Rectus Femoris (RF) and Biceps Femoris (BF) muscles, relating these measures to parameters of functionality and Quality of Life (QL). 18 chronic hemiparetic individuals were allocated between two groups: Experimental Group (EG), n=10, submitted to physiotherapy and FAP protocol and Control Group (CG), n=8, which only performed physiotherapy; these groups have done 14 individual sessions. 18 healthy subjects were evaluated to compare the WB symmetry between LL. The groups were evaluated pre and post intervention. Muscular activation data of the RF and BF were collected through surface electromyography and the data of the symmetry analysis through force platform, in addition to being applied scales of functionality and QL (Specific Life Quality Scale for Stroke, Functional Independence Measure - MIF and Berg Balance scale-BERG). There was a decrease in the symmetry ratio of WB between LL among healthy and hemiparetic subjects ( $p=0.001$ ), reflecting greater WB in the paretic LL in the EG. Both groups showed improvement in functional scales (MIF:  $p=0.025$ , BERG:  $p=0.001$ ) and QL ( $p=0.040$ ). FAP had a positive influence on the symmetry of WB between the LL, reflecting on the improvement of functionality and QL.

### Biography

Joyce Xavier Muzzi de Gouvea has completed his Graduation in Physiotherapy in 2005, Brazil. She has completed her Master's in Neuroscience and Behavior, specialist in Physiotherapy applied to Neurology and Acupuncture. She is currently a Physiotherapist at the Association for Assistance to the Disabled Child in the Aquatic Physiotherapy Sector.

joycemuzzi@yahoo.com.br