

7th International Conference & Exhibition on

Physiotherapy & Physical Rehabilitation

March 25-26, 2019 | Rome, Italy

Chronic lower limb oedema in a population of Saudi Arabian residents with multiple sclerosis: An evaluation of progressive resistance exercise

Asma Abdullatife Alderaa, Pinnington L, Moffatt C and Keeley V

King Saud University, Saudi Arabia
University of Nottingham, UK

Introduction: The prevalence rate of Chronic Lower Limb Oedema (CLLO) in people with MS (pwms) has been reported to be between 45% and 62% respectively (Solaro et al., 2006; Keeley et al. 2017). Statistical significance was found between age and Expanded Disability Status Scale (EDSS), where older patients with more disability were more likely to have oedema (ibid). Evidence of chronic oedema managements are mainly a specific group related management or in a form of components treatment where the effectiveness of one component rather than the other can not be confirmed. Moreover, evidence related to non-pharmacological intervention in forms of Exercises to treat CLLO with MS people has not been investigated thoroughly. Therefore, with this lack of evidence in this area this study is aimed to assess the effectiveness of progressive resistance Exercise (PRE) in the management of changing chronic lower limb oedema (CLLO) in people with MS who are resident in Saudi Arabia and to determine the impact of CLLO on MS patients' quality of life.

Methods: Two-hundred and fifty-five pwms and EDSS between 3 to 6.5 were screened from two Hospitals for CLLO by using a pitting oedema test. Twenty-two were found to have CLLO, however, fifteen out of them agreed to participate in the study. The participants performed a Biweekly 12-weeks lower limb PRE. The participants were assessed for any changes in their lower limb circumference pre and post intervention using a 4 cm interval circumference which divided the legs into 6 segments. In addition, Quality of Life (QOL) was measured by using the Quality of Life Measure for Limb Lymphedema (LYMQOL) tool and Short form of the mcgill Pain Questionnaire (SF-MPQ) in pre and post intervention.

Results: Fourteen participants completed the intervention with mean age of 44 ± 7.11 years, EDSS 5.6 ± 0.96 , BMI 29.08 ± 7.91 and disease onset 12.92 ± 3.7 years. A part from the 5th segment in the Right leg, mean difference volume reduction was reported in all segments and a greatest reduction can be seen in the 1st segment -9.11 ml (SD 27.5) followed by 6th segment -8.57 ml (SD 20.3). However, none of the segments were statistically significant. In the left leg, again the highest mean difference volume reduction can be seen in the 2nd segment -5.37 ml (SD 15.5) then 1st -4.51 ml (SD 12.2) and followed by 6th -1.74 ml (SD 30.4). Similar to the right leg, none of the left leg segments were statistically significant. In terms of pain and QOL, statistically significant reduction was reported in the Visual Analog Scale (VAS) domain $P=0.01$ and present pain intensity (PPI) Domain $P=0.02$, and statistically significant increase in the overall QOL domain $P=0.006$.

Conclusion: This twelve-week program results demonstrate that PRE has effects on CLLO in terms of pain and QOL in pwms. However, no statistically significant was found in the legs volume but mean difference reduction was reported at different segments in both legs. More research with bigger sample size is necessary.

Biography

Asma Alderaa is a PhD student in the University of Nottingham, UK, at her last year. She earned her Master degree from St Gorges University in London in 2011. She is a Lecturer at King Saud University, KSA. Her main research interest is in multiple sclerosis and lymphatic system.

Deraa4_pt@yahoo.com