



Mobilization With Movement for Shoulder Dysfunction in Older Adults: A Pilot Trial



Cristina Lirio Romero MSc^{a,*}, María Torres Lacomba PhD^b,
Yurema Castilla Montoro BSc^c, David Prieto Merino PhD^d,
Soraya Pacheco da Costa PhD^b, María Jesús Velasco Marchante MSc^e,
Gema Bodes Pardo MSc^f

^a *Physiotherapist, State Center of Attention to Brain Injury, Madrid, Spain*

^b *Professor, University of Alcalá, Madrid, Spain*

^c *Physiotherapist, Rio Riansares Nursing Home, Corral de Almaguer, Toledo, Spain*

^d *Lecturer, Clinical Trial Unit, London School of Hygiene & Tropical Medicine, London, United Kingdom*

^e *Occupational Therapist, Messengers of Peace Association, Golden Age, Toledo, Spain*

^f *Physiotherapist, Private Practice, Madrid, Spain*

Received in 9 October 2014; received in revised form 24 March 2015; accepted 25 March 2015

Key indexing terms:

Shoulder;
Disability evaluation;
Physical therapy
modalities;
Frail elderly

Abstract

Objective: The purpose of this study was to evaluate the feasibility of the methods proposed to conduct a full randomized clinical trial to assess the effectiveness of mobilization with movement on shoulder functionality in older adults with shoulder dysfunction.

Methods: A pilot, randomized, single-blinded clinical trial was carried out with 44 older adults (83.9±8.2 years) with shoulder dysfunction in 3 nursing homes in Toledo, Spain. Participants were recruited through information sessions and were randomly allocated into 2 groups. The control group (n = 22) intervention consisted of a physical therapy standard protocol proposed by the Spanish Rheumatology Society. Techniques based on Mulligan's concepts of mobilization with movement were added to the standard protocol for the experimental group (n = 22) intervention. Interventions took place 3 times a week for 2 consecutive weeks and were performed by 2 experienced therapists. Main outcomes were recruitment rates, participation and adherence to interventions, assessment procedures, and the implementation of mobilization with movement. Clinical outcomes were shoulder functionality, active glenohumeral range of motion, and pain intensity. Data were collected at baseline, after each group intervention, and at 1 and 3 months after finishing interventions.

Results: All the participants accepted to be randomized. Participation rates were 97.7% for the experimental group and 95.5% for the control group. The analysis of variance did not show any statistically significant difference between treatment groups for any of the variables

* Corresponding author. C/Manuel Ortiz, 4-Ocaña-45300, Toledo, Spain. Tel.: +34 600320518.

E-mail address: cristylirio@hotmail.com (C. Lirio Romero).

(all P values for the group effect were greater than .36) or a change of the difference between groups over time (all P values for the time-treatment interactions were greater than .3).

Conclusion: The research methods tested in this pilot study offer a suitable foundation to conduct a full clinical trial.

© 2015 National University of Health Sciences.

Introduction

Shoulder dysfunction is a common problem in older adults with a described prevalence of 21%.¹ Shoulder symptoms, such as pain and reduction in active range of motion (AROM) and functionality, might be associated to chronic pain, disability, and a decrease in physical performance over time.^{1,2} Upper limbs and shoulder joint proper functionality leads to an adequate independence in activities of daily living (ADLs) and functional performance. Therefore, maintaining independence in ADL and the functional well-being in older adults should be a priority target for health care.³ A successful therapeutic approach depends on understanding that the aging process is responsible for major changes in muscles and joints and may cause muscle disorders and joint stiffness.⁴

Physical therapy interventions are often recommended as the first choice for a conservative treatment in the most common approaches to treat patients with shoulder dysfunction.^{5–7} Regarding physical therapy interventions, there are evidence about the effectiveness of therapeutic exercise,^{8,9} and the benefit of manual therapy^{10,11} so as to increase shoulder mobility, and a trend in improving pain measures. Enhancements in function and quality of life are still questionable.^{6,7}

Mobilization with movement (MWM) is a manual therapy technique based on the analysis and correction of any minor positional faults in a joint. According to Mulligan, positional faults are due to various soft tissue and/or bone lesions in/around the joint. The relevance of a correct joint position was argued in a kinematic study in healthy shoulders.¹² This technique aims to realign the joints positional faults by performing a manually specific oriented glide to a painful joint, and assessing and adjusting force intensity. Meanwhile, the patient performs an active joint movement so that patient's symptoms are immediately relieved and the maneuvers improve pain and movement.¹³ Therefore, when a correct mobilization is sustained, pain-free movement is restored. The patient must repeat the movement several times to get an improvement that

lasts over time.^{14,15} The initial effects of MWM in adults were assessed by Teys et al¹⁶ who proved its effectiveness in increasing shoulder AROM and decreasing positional faults. Therefore, it may be an effective technique in the physical therapy treatment for shoulder dysfunction, as this addresses passive and active shoulder structures.¹⁷ However, no studies about its effectiveness for shoulder dysfunction in older adults have been found.

Considering the differences between the treatment for shoulder dysfunction in adults and older people, and the little evidence about the treatment in the aged population, it may be useful to carry out a pilot study using the Mulligan MWM technique to assess the possibility of conducting a full randomized controlled trial (RCT).

The purpose of this pilot study was to evaluate the feasibility of the methods proposed to conduct a full RCT to assess the effectiveness of Mulligan concept MWM on shoulder functionality in older adults with shoulder dysfunction. The primary objective was to evaluate the process of recruitment rates, willingness of participants to be randomized, participant attendance and adherence to interventions, assessment procedures, and implementation of MWM. The secondary aim was to undertake a preliminary comparison of patient-reported outcomes and to estimate the variability of these outcomes in older adults with shoulder dysfunction.

Methods

Study Design

This study was a feasibility study of a randomized clinical trial with concealed randomization and blinded assessment that was carried out between January 2012 and March 2013. This study was approved by *Complejo Hospitalario de Toledo* Human Research Ethics Committee. It was registered at the ClinicalTrials.gov register (Trial Registration: NCT2217540 <https://register.clinicaltrials.gov/>).

Download English Version:

<https://daneshyari.com/en/article/2619888>

Download Persian Version:

<https://daneshyari.com/article/2619888>

[Daneshyari.com](https://daneshyari.com)