

Annual Congress on  
**Rehabilitation  
and Future Pharma**

November 17, 2022 | Webinar

**Accepted Abstracts**



Annual Congress on  
**Rehabilitation and Future Pharma**

November 17, 2022 | Webinar

Received date: 07-06-2022 | Accepted date: 09-06-2022 | Published date: 26-12-2022

**Effectiveness of Mechanical Diagnosis and Therapy (MDT) approach enriched with comprehensive physical therapy on pain and disability of patients with shoulder local pain which originated from cervical Derangement**

**Maryam Daghighi and Hossein Negahban**

Mashhad University of Medical Sciences, Iran

Considering the prevalence of shoulder local pain which originated from cervical derangement, the aim of this pilot case-series (single group pre-test/post-test design) was to evaluate the effect of MDT approach enriched with evidence-based physical therapy on pain and disability of patients with upper limb local pain which originated from cervical derangement.

**Method:** 25 patients with shoulder local pain which was originated from cervical derangement participated in 10 session of physical therapy. For differential diagnosis we used Mechanical Diagnosis and Therapy (MDT) approach and used the Evidence-based physical therapy for treatment. Evidence-based physical therapy comprised MDT individualized exercise, manual therapy techniques (mobilization and distraction techniques, stretching techniques), stretching and strengthening exercise, coordination exercise and Proprioceptive Neuromuscular Facilitation exercise (PNF). The Numerical Pain Rating Scale (NPRS), Global Rating Of Change (GRC), Shortened Disability of Arm, Shoulder, Hand (Quick-DASH) and frequency of discharge was evaluated before and 4 weeks treatment., immediately after end of treatment sessions.

**Result:** pain was significantly reduced after treatment ( $p < 0.001$ ) and paired t-test analysis revealed that all outcome measures improved significantly for 22 patients after the treatment ( $p < 0.001$ ). So that mean Quick-DASH difference was  $40.79 \pm 15.28$  and mean NPRS difference between pre intervention and post intervention was  $4.30 \pm 1.10$ . In GRC scale 19 patients reported improvement more than average.

**Conclusion:** The present results provide preliminary evidence that mechanical diagnosis and therapy approach combined with Evidence-based physical therapy could significantly reduce pain and improve function.

**Recent Publications**

1. Daghighi M, Negahban H, Ebrahimzadeh MH, Moradi A, Kachooei AR, Raeesi J, et al. The effectiveness of comprehensive physiotherapy compared with corticosteroid injection on pain, disability, treatment effectiveness, and quality of life in patients with subacromial pain syndrome: a parallel, single-blind, randomized controlled trial. *Physiotherapy Theory and Practice*. 2022;1-15.
2. Daghighi M, Negahban H, Mostafaei N, Saidi A, Ebrahimzadeh MH, Moradi A, et al. Psychometric properties of Full and Shortened Persian-version of western Ontario rotator cuff index questionnaires in Persian-speaking patients with shoulder pain. *The Archives of Bone and Joint Surgery*. 2022.
3. Yosephi MH, Ehsani F, Daghighi M, Zoghi M, Jaberzadeh S. The effects of trans-cranial direct current stimulation intervention on fear: A systematic review of literature. *Journal of Clinical Neuroscience*. 2019; 62:7-13.

maryamdaghighiyani@gmail.com

Annual Congress on  
**Rehabilitation and Future Pharma**

November 17, 2022 | Webinar

Received date: 31-01-2022 | Accepted date: 02-02-2022 | Published date: 26-12-2022

## Conditions to recover gaze stabilization and dynamic balance after vestibular loss

**Michel Lacour**

Aix-Marseille University/CNRS, France

Dynamic balance impairment and gaze stabilization deficits are disabling symptoms in patients with unilateral vestibular loss. Vestibular Rehabilitation (VR) is an efficient way to recover these impaired functions but 1) when and how VR must be done is not known, and 2) whether the degree of vestibular loss matters is uncertain.

**Methods:** Balance performance (dynamic posturography) and gaze stabilization (Vestibulo-Ocular Reflex [VOR] gain) were investigated in 81 Unilateral Vestibular Hypofunction (UVH) patients tested before and after VR (unidirectional rotational protocol) performed either early (first two weeks) or later (fifth to sixth weeks) after vertigo attack.

**Findings:** Results showed that: 1) the UVH patients did not constitute a homogenous population. A cluster analysis clearly differentiated two distinct subgroups before VR, with very low ( $<0.20$ ; mean  $0.04 \pm 0.05$ ) or higher ( $>0.20$ ;  $0.34 \pm 0.12$ ) VOR gain. 2) both dynamic balance and gaze stabilization functions were fully recovered only in patients submitted to early VR and whose pre-rehab VOR gain was above 0.20. In this subgroup, and only in this subgroup, the balance performance with or without vision on stable or unstable support returned to control values recorded in healthy controls, and the VOR gain increased up to non-pathological values ( $>0.80$ ).

**Conclusions:** The present study is the first demonstration that VR must be performed very early after vestibular symptoms onset (critical period for neuronal reorganization), and that early rehabilitation is a necessary but not sufficient condition: the degree of vestibular loss matters (neuronal plasticity depends on the quantity of remaining vestibular afferents). Getting precise vestibular diagnosis and fastly referring patients to physiotherapist are the major clinical implications of this study.

### Recent Publications

1. Michel L, Laurent T, Alain T. Rehabilitation of dynamic visual acuity in patients with unilateral vestibular hypofunction: earlier is better. *Eur Arch Otorhinolaryngol.* 2020 Jan;277(1):103-113
2. Lacour M, Tardivet L, Thiry A (2020a) A critical period for rehabilitation of unilateral vestibular hypofunction patients with the unidirectional rotation paradigm. *J Rehab Therapy* 2(1): 16-23.
3. Lacour M, Tardivet L, Thiry A (2020b) Rehabilitation of posture control in unilateral vestibular hypofunction patients depends on vestibular rehabilitation onset and postural task difficulty. *J Rehab Therapy* 2(2): 13-26.

michel.lacour0802@gmail.com

Annual Congress on  
**Rehabilitation and Future Pharma**

November 17, 2022 | Webinar

Received date: 14-07-2022 | Accepted date: 19-07-2022 | Published date: 26-12-2022

## **Shoulder pain and lumbar pain, two typical markers to identify Parkinson's disease**

**Pietro Marano<sup>1</sup> and Seminara M<sup>2</sup>**

<sup>1</sup>IRCCS Oasi Maria SS., Italy

<sup>2</sup>Cannizzaro Hospital, Italy

In Parkinson's disease, shoulder pain as well as low back pain are the red flags that identify the pathology. In addition to being identified with one of the pure motor symptoms, it is a disorder that, in addition to the initial pain, worsens over time, interferes with the daily life activities of these patients, compromising their autonomy. Dressing, combing and eating, walking, bending over on the trunk, are activities that create problems that are not only painful but also motor, with severe functional limitations, which immediately require the intervention of the care giver, with serious repercussions on the patient's life. Stamey et al. (2008) claims that 11% of patients experience scapulo-humeral pain. The causes seem to be reminiscent of postural phenomena, reduction of ROM with changes in joint dynamics. Furthermore, it should be noted that the pain threshold in parkinsonians is lower than in healthy subjects (Gerdelat-Mas et al. 2007). Regarding lower back pain, it is useful to remember the role played by the multifidus muscle which plays a fundamental role in supporting the spine, especially the lumbar spine and in the pain that this alteration causes. Very high percentages of Parkinsonian patients begin their pathology with lumbar pain, which precedes the onset of the pivotal symptoms by three years that then lead to the diagnosis of Parkinson's disease. Often, due to the scarce collaboration that exists between medical specialists, physical, pharmacological and sometimes even surgical treatments are carried out completely out of place and useless, when it would be much easier to establish a collaboration that could also anticipate a diagnosis and facilitate therapy.

### **Recent Publications**

1. Tessitore, A., Marano, P., Modugno, N. et al. Caregiver burden and its related factors in advanced Parkinson's disease: data from the PREDICT study. *J Neurol* 265, 1124–1137 (2018).
2. Mariachiara Sensi, et al., Which patients discontinue? Issues on Levodopa/carbidopa intestinal gel treatment: Italian multicentre survey of 905 patients with long-term follow-up, *Parkinsonism & Related Disorders*, Volume 38, 2017, Pages 90-92
3. Lopiano, L., Modugno, N., Marano, P. et al. Motor outcomes in patients with advanced Parkinson's disease treated with levodopa/carbidopa intestinal gel in Italy: an interim analysis from the GREENFIELD observational study. *Neurol Sci* 37, 1785–1792 (2016).

pmarano@oasi.en.it