

ment were 50, (SD 18), improving to 70, (SD 14). Mean difference between the groups at 6 months was 8.1, demonstrating a significantly higher VISA score in the cell group, ($p=0.006$). Group 1 also demonstrated a significantly faster effect of treatment, ($p=0.002$).

Conclusions: Ultrasound guided injection of autologous skin-derived tendon like cells with autologous plasma and standardised physiotherapy leads to faster and more significant improvement in pain and disability than autologous plasma and standardised physiotherapy alone.

Implications: This is the first study on humans using cell therapy for patellar tendinopathy. In keeping with the animal literature it has demonstrated superior results to previously published findings on non cell therapy treatments. Further research is required to assess the long-term effects and potential benefits for other tendinopathies such as tennis elbow.

Keywords: Patellar tendinopathy; Fibroblasts; Cell therapy

Funding acknowledgements: None.

Ethics approval: Ethical approval from the institutional review board and local ethics committee at the Royal National Orthopaedic Hospital, Stanmore, London, UK.

Research Report Poster Display

Number: RR-PO-211-1-Tue Tuesday 21 June 13:00
RAI: Exhibit Halls 2 & 3

PREVALENCE OF NEUROMUSCULOSKELETAL SYMPTOMS IN PORTUGUESE INSTRUMENTALIST MUSICIANS

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Purpose: The major reason of this study was to analyze the prevalence of neuromusculoskeletal symptoms in Portuguese instrumentalists musicians. The influence of gender in the symptoms, as well as the most common symptoms and affected body regions, were also analyzed.

Relevance: Neuromusculoskeletal injuries commonly affect instrumentalist musicians, leading to severe disability and functional limitations. However, their health problems are still misunderstood and poorly studied in Portugal. The need of health promotion programmes for this population is crucial to prevent neuromusculoskeletal injuries.

Participants: 114 music students of Instrument, Jazz and Ancient Music, from the School of Music and Performing Arts of Oporto, answered voluntarily an anonymous questionnaire about their musical practice and associated behaviors.

Methods: After formal authorization, students and teachers were informed personally, by e-mail or through posted information. The students answered the questionnaire, with issues referring to anthropometric characteristics, identification and

characteristics of the practice of the instrument, present and past problems of physical health, location of each symptom in a body chart and questions to characterize pain. The students were then divided into instrument classes (strings, keyboard, woodwind, brass and drums) for further analysis.

Analysis: The data were analyzed by the statistical software SPSS® (Statistical Package for Social Sciences) version 17.0 for Microsoft Windows®. Measures of central tendency and spread were used to describe the study sample and prevalence. These included frequencies and proportions, mean, standard deviation and maximum and minimum values. To analyze the influence of gender in the symptoms it was used a Chi-square test, with a statistical significance set at $p < 0.05$.

Results: 96% of the students reported symptoms, 66.7% of them referring fatigue and 45.6% pain, this last one typically of moderated intensity and affecting practice moderately. Regarding the affected body regions, the thoracic spine was the most reported region (35.1%), followed by left shoulder (31.6%). In fact, 91.7% of the string players reported symptoms, especially in the thoracic spine, just like keyboard players (86.7%) and brass players (83.3%). Woodwind players reported symptoms especially in the left shoulder (97.4%) and drums students especially in the right forearm and hand/wrist of both limbs (92.3%). The gender did not influence significantly the existence of symptoms.

Conclusions: Instrumental musicians have a high prevalence of neuromusculoskeletal symptoms due to a particularly intense activity, being a population which is constantly in lesion risk. Further investigation should determine the real risk factors analyzing biomechanics, patterns of movement, ergonomic requirements, personal features and behaviors, in order to determine real and adaptive strategies to deal with these professionals' problems.

Implications: The high prevalence observed indicate that physical therapists must intervene, for both treatment and prevention, being aware of all the specific characteristics and demands of this profession.

Keywords: Musician; Prevalence; Neuromusculoskeletal injury

Funding acknowledgements: None.

Ethics approval: The will to fill the questionnaire voluntarily was used as an informed consent from the participants.