ABSTRACT

Study Design: Case Report

Background and Purpose: The use of pain neuroscience education (PNE) is indicated when there are psychosocial contributions to a person's pain experience. The scientific literature has established the efficacy of the use of PNE in a population with chronic pain but there is a paucity of evidence to support the use of PNE in athletic populations. The purpose of this case report is to describe the use of PNE and graded exposure exercises specific to an athlete returning to Olympic weightlifting.

Case Description: The patient underwent an L5-S1 discectomy to resolve paresthesia in his leg, completed a bout of post-operative rehabilitation but returned 15 months after the surgery. He presented with the chief complaint of low back tightness and fear of lumbar flexion. When asked to touch his toes during the lumbar flexion range of motion examination, he demonstrated aberrant lumbar movement by hinging at the hips with a straight back due to fear that flexing would damage his lumbar spine. The patient was seen for four weeks with a focus on PNE and graded exposure to weightlifting activities.

Outcomes: The patient returned to Olympic weightlifting and decreased his Fear Avoidance Behavior Questionnaire (FABQ) score from 22 to 4 during the course of physical therapy. His Tampa Scale of Kinesiophobia (TSK) score also decreased from 55 to 31. By discharge, he was able to bend at the lumbar spine with full flexion and no longer believed the motion to cause damage.

Discussion: The case is unique because it describes the implementation of PNE in an athlete returning to weightlifting, and the scientific literature for use of PNE in this population is lacking. The identification of kinesiophobia and implementation of PNE and graded exposure exercises lead to an optimal outcome for this patient.

Level of Evidence: Level 4

Key Words: graded exposure, kinesiophobia, lumbar discectomy, movement system, pain neuroscience education, weightlifting