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**Effect of a mobility focused exercise training in rehabilitation of an elite weightlifter with shoulder pain and weakness: A case study****Peng Zhao, Lingling Li and Runze Guan***China Institute of Sports Science, China*

Shoulder pain and weakness is associated with complex pathologies and often precludes weightlifters from participation in training. The role of exercise training in weightlifters with shoulder pathology remains unclear. This case report described an exercise program in management of a 22-year-old elite weightlifter with primary complaint of 2-year duration of right shoulder pain and weakness which were not relieved with steroid injection, manual therapy or physiotherapy. There was limitation in all active range of motion especially horizontal extension (13°) and external rotation (41°) with pain intensity at 4/10 and 10/10 (numeric pain rating score), respectively. Muscle weakness was most significant at supraspinatus and teres minor, 38% and 27%, respectively compared to his left shoulder. An exercise training program focusing on improving mobility was designed for this athlete following physical examinations, including specific stretching, muscle activating and scapular stability training (once per day, 60 min per session). All exercises were completed under instruction as pain allowed. Quantitative assessment was conducted at the end of each week for 3 weeks. After the program, the athlete was pain-free in all movements except the O'Brien active compression internal rotation test, the pain was however reduced from 10/10 to 3/10. The horizontal extension and external rotation ranges increased to 79° to 120°, respectively and strength of all rotator cuff muscles returned to normal. After 1-month follow up, he was totally pain-free and back to normal function and weightlifting activities. The outcomes sustained through 6-month and one year.

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