

CASE REPORT

AN INTERVENTION-BASED CLINICAL REASONING
FRAMEWORK TO GUIDE THE MANAGEMENT OF
THORACIC PAIN IN A DANCER: A CASE REPORTMichael Masaracchio, PT, PhD¹Kaitlin Kirker, SPT¹Cristiana Kahl Collins, PT, PhD¹William Hanney, PT, PhD²Xinliang Liu, PhD²

ABSTRACT

Background and Purpose: As a result of the anatomical proximity of the thoracic spine to the cervical, lumbar, and shoulder regions, dysfunction in the thoracic spine can influence pain, mobility, and stability across these areas. Currently, a paucity of evidence exists addressing treatment of individuals with primary thoracic pain, especially in young, athletic patients. Furthermore, current research discussing clinical reasoning frameworks focus on the differential diagnostic process. The purpose of this case report was to present a framework that describes the clinical reasoning process for the implementation and sequencing of procedural interventions for the management of a dancer with thoracic pain.

Case Description: A 21-year-old female dancer presented to physical therapy with a medical diagnosis of thoracic pain. The patient reported exacerbation of left thoracic pain with prolonged sitting, twisting/arching her back during dance, and lifting >15 lbs overhead. Examination revealed hypomobility with positive pain provocation during mobility testing of T1-T3 and the sternocostal junction of ribs 2-4, with associated muscle guarding palpated in the left iliocostalis thoracis and levator scapulae.

Outcomes: Following 10 visits, the patient had no pain, no functional deficits, and a Global Rating of Change (GROC) of +6. She returned to full competition, and a 3-month follow-up revealed continued success with dancing and a GROC of +7.

Discussion: This case report described the successful management of a dancer with primary thoracic pain using a clinical reasoning framework for the sequencing of procedural interventions, while incorporating Olson's impairment-based classification system. A combination of manual therapy techniques and neuromuscular control exercises were incorporated to address mobility, stability, mobility on stability, and skill level impairments, which allowed the patient to return to dance activities safely. Future studies should consider the development of further treatment-based clinical reasoning frameworks that illustrate the importance of the sequencing within a session and across the episode of care.

Key Words: clinical reasoning, impairment-based classification, manual therapy, neuromuscular re-education, thoracic pain.

Level of Evidence: 4

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