

DIFFERENTIAL DIAGNOSIS OF THORACIC PAIN

Adam D. Lever, PT, DPT, ATC-2016 Orthopedic Resident

Misty Seidenburg, PT, DPT, OCS, Cert. MDT-Orthopedic Residency Program Coordinator
Drayer Physical Therapy Institute, Mechanicsburg, PA
(5108 E. Trindle Rd, Mechanicsburg, PA, 17050)

Background: The prevalence of thoracic pain is a rare referral in physical therapy. It is imperative that physical therapists are adept at differential diagnosis between mechanical spinal pain and sinister pathologies that can refer symptoms to this region. This case highlights the importance of differential diagnosis of this region and determining when to treat, refer, or treat and refer.

Case Description: The patient was a 75-year-old male who was referred from an orthopedic surgeon for physical therapy for complaints of thoracic spine pain. He reported an two month insidious onset of pain with radiographic imaging that was unremarkable and was referred to physical therapy with a diagnosis of cervicalgia and thoracic pain.

The patient presented with localized midthoracic pain that radiated to both shoulders. His pain rating on the Numeric Pain Rating Scale (NPRS) was 2/10 at best to 7/10 at worst. His functional outcome score on Focus on Therapeutic Outcomes (FOTO) was 78. He reported constant pain unrelated to activity that woke him from night and only eased with the use of Valium and heat to his back. Medical screening also revealed significant weight loss over the prior 6 months. The patient initially denied any relevant past medical history findings, but additional questioning revealed recent esophageal cancer diagnosed the prior fall with successful treatment concluding in the winter. He reported negative biopsies until recently in which the oncologist reported a positive finding.

The initial hypothesis following the subjective examination was that his pain was either non-mechanical in nature and related to his cancer, or mechanical thoracic pain, which could be due to thoracic joint restriction or dural tension due to his past radiation treatment. The objective exam revealed an extremely extended and prominent thoracic spine with muscle wasting. He had significantly restricted thoracic range of motion with his concordant symptoms provoked with thoracic spine flexion with clinician overpressure. His symptoms were then reduced with an improvement in pain and mobility following grade III thoracic posterior-anterior (PA) mobilization. The hypothesis following the objective examination was confirmed as thoracic spine mobility deficits and the treatment decision made was to treat and refer for further work-up by his oncologist.

Outcomes: Manual and exercise interventions were used to address his limited thoracic spine mobility, and the patient was treated for 11 visits with discharge due to upcoming esophageal surgery. By conclusion of treatment the patient's symptoms were intermittent, a significant reduction in medication needed, and improved thoracic mobility. During a follow up visit with his oncologist, they confirmed his symptoms were likely related to the physical therapy hypothesis of scar tissue formation from his radiation treatment.

Discussion/Clinical Relevance: The findings of this case report indicate the importance of identifying red flags when evaluating and treating patients with thoracic pain and stiffness. It is crucial that Physical Therapists screen for spinal red flags, but also consider additional findings when determining appropriateness of physical therapy services.