

A Hand Full of Problems: A Case of Multifactorial Upper Extremity Pain

Aruba Asad DO, Naveed Tariq DO, Aaron Zell DO, Michael Fedorovsky DO, Leyla Nasr MS4, Tova Plaut DO

NuHealth
Together through life.
Nassau University Medical Center
PM&R

Introduction

Upper extremity pain and weakness frequently pose diagnostic challenges due to the overlap between cervical spine pathology, musculoskeletal conditions, and peripheral nerve entrapment syndromes. We present a patient with concurrent findings despite normal electrodiagnostic testing. This case highlights the value of evaluating for coexisting diagnoses, as recognizing each contributing condition allows treatment to address all sources of pain and disability.

All patient protected health information has been de-identified. As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per NuHealth policy.

Case Presentation

A 49-year-old man presented with progressive right upper extremity pain involving the neck, elbow, and wrist. His most recent complaint was severe right-sided neck pain (10/10) radiating to the dorsal hand and anterolateral shoulder, worsened by cervical flexion, lifting, pushing, pulling, coughing, and driving. He also reported stiffness, muscle spasms, joint pain, and myalgias. He described chronic right elbow pain (5/10) radiating into the forearm and hand, aggravated by lifting, gripping, typing, and computer mouse use, and right wrist pain (9/10) radiating into the ventral hand with weakness and functional loss. Symptoms impaired self-care, household activities, recreation, and social participation. Examination showed loss of cervical lordosis, cervical paraspinal spasm, positive right Spurling and cervical compression tests, elbow swelling with painful motion, and reduced wrist and grip strength. A hand of benediction was present. MRI revealed De Quervain tenosynovitis, extensor carpi ulnaris tendinosis, lateral epicondylitis with partial tearing, and chronic biceps and triceps tendinopathy. EMG was unremarkable. Conservative treatment with oral/topical NSAIDs, steroids, bracing, and physical therapy was initiated while evaluating for concomitant C8-T1 cervical radiculopathy. Cervical epidural steroid and epicondyle injections remain options if symptoms persist.

Median nerve palsy may not show on nerve testing during early stages of injury when only sensory fibers are affected

Discussion

This patient had three problems in one arm: cervical strain with positive Spurling suggesting C8–T1 root irritation, a torn lateral epicondyle tendon, and tenosynovitis. A hand of benediction suggested high median nerve palsy, yet nerve testing was normal. This occurs when only sensory fibers are affected, injury is early, or pain limits effort. Painful tendons also weaken grip without nerve damage, which supports a combined musculoskeletal and cervical approach rather than an isolated nerve lesion.

References

Chiou-Tan FY. *Musculoskeletal mimics of cervical radiculopathy*. *Muscle & Nerve*. 2022; 66(1): 6-14. doi:10.1002/mus.27553 https://onlinelibrary.wiley.com/doi/10.1002/mus.27553

Silver S, Ledford CC, Vogel KJ, Arnold JJ. Peripheral Nerve Entrapment and Injury in the Upper Extremity. Am Fam Physician. 2021 Mar 1;103(5):275-285. PMID: 33630556. https://www.aafp.org/afp/2021/0301/p275

Dillingham TR, Annaswamy TM, Plastaras CT. *Evaluation of persons with suspected lumbosacral and cervical radiculopathy: Electrodiagnostic assessment and implications for treatment and outcomes (Part I)*. *Muscle & Nerve*. 2020; 62: 462–473. https://doi.org/10.1002/mus.26997 https://onlinelibrary.wiley.com/doi/10.1002/mus.26997

Tahmasbi Sohi M, Nortman S, Brega K, Forster JE, Guzzetti JR. Correlation of Electrodiagnostic Findings in C8 Radiculopathies With Radiographic Data: A Retrospective Chart Review. Am J Phys Med Rehabil. 2021 Jul 1;100(7):721-724. doi: 10.1097/PHM.0000000000001722. PMID: 34131095. https://pubmed.ncbi.nlm.nih.gov/34131095/