Cervicogenic Dizziness After Platelet-Rich Plasma Injection In Cervical Spine

Eric Xu DO, Abhishek Shrinet MD, Stella Berger, Kelly Scollon-Grieve MD

Introduction

Cervicogenic dizziness (CGD) is a rare and poorly understood phenomenon theorized to result from sensory afferent disruption and abnormal conflicting processing of information from cervical, visual, and vestibular inputs (1). Factors include postural misalignment, impaired proprioception, restricted range of motion, or altered vertebrobasilar artery blood flow may precipitate CGD (2).

Case Report

The authors present a 25-year-old female with hypermobile Ehlers-Danlos syndrome and a 10-year history of chronic axial neck pain who was evaluated at our outpatient sports and spine rehabilitation clinic. Physical examination revealed significant focal tenderness over the bilateral C2-C6 facet joints, with reproduction of pain and increased tenderness at end ranges of ipsilateral rotation. To alleviate her neck pain, we performed intra-articular cervical facet joint injections with platelet-rich plasma (PRP)

During her one-week follow up, the patient experienced an intensification of her usual neck pain followed by the development of incapacitating disequilibrium and nausea provoked by any change in head position that worsened with abrupt movements. She reported a "wobbly head" sensation with severe heaviness and the sensation of uncoordinated and inaccurate head movement. She was diagnosed with CGD and subsequently enrolled in a vestibular rehabilitation program. At her four-month follow up, she demonstrated marked improvement in posture, full resolution of neck pain, restored range of motion, and no tenderness or pain with facet loading.

Discussion

Although the etiology of CGD is unclear, it is hypothesized to involve ligamentous disruption with secondary conflict between visual, vestibular and proprioceptive feedback. Cervical facet joints are the most richly innervated joints in the spine, with a dense network of mechanoreceptive and nociceptive free nerve endings responsible for proprioceptive feedback and awareness (3).

Injections of the cervical facet joints may trigger an inflammatory response and cause joint effusion with secondary stretch-induced alteration in capsular ligament sensory feedback, thereby precipitating CGD. While PRP has been successfully utilized in the treatment of cervical pain associated with facet arthropathy, this case highlights a potential risk of inducing a transient yet severe and prolonged episode of CGD(4).

Based on our literature search, this is the first documented case of CGD induced by cervical facet joint injections with PRP. with PRP should be aware of this potential complication and educate patients onrisk.

References

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