Upper Extremity Paresthesia in a Collegiate Swimmer
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**Background:** A 20 year-old male individual medley and backstroker presented with idiopathic persistent cervical spine pain and paresthesia in the upper extremities and jaw. Reported symptoms started four years ago bilaterally, but recently became more prevalent on the right side. He reported being able to perform sport activities on a self-limiting basis. Symptoms increased throughout the day and decreased with lying down. The patient’s medical history was not significant for traumatic injuries to the spine or surrounding area. Visual observation revealed increased cervical lordosis with forward carriage of the head and chin protraction along with thoracic kyphosis and associated rounded shoulders. Physical examination elicited bilateral diffuse cervical spine tenderness, upper cervical extensor muscular spasms, and normal skin temperature. AROM testing revealed lower cervical and upper thoracic spine hypomobility and induced symptomatic increases with bilateral cervical extension, lateral flexion, and rotation. PROM testing revealed sternocleidoid, trapezius, levator scapulae, and pectoralis major and minor tightness. MMT elicited deep anterior cervical, serratus anterior, and scapular retractor weakness. Cervical compression, cervical distraction, Spurling’s, Roos, and military brace tests were positive; however, valsalva maneuver and Adson’s and Allen tests were negative. Neurologic testing revealed significant bilateral sensory and motor deficits over the entire right upper quarter. **Differential Diagnosis:** Rheumatoid arthritis, multiple sclerosis, tumor, cervical spondylolysis, degenerative osteoarthritis, spinal stenosis, cervical disk herniation, clinical cervical instability, facet joint dysfunction, degenerated facet joint, and cervical radiculopathy. **Treatment:** The patient was referred to the team orthopedist and removed from athletic participation. Following initial consultation he was referred to a neurologist who ordered blood tests and an MRI of the brain and cervical spine. Blood tests were normal. The MRI of the cervical spine revealed mild asymmetric right-sided uncovertebral hypertrophy at C2-C3 and C3-C4 with mild-to-moderate neuroforaminal stenosis. A mild mass effect on the left axillary sleeve at the C3-C4 segment was noted. A small subannular fissure and left central/subarticular disc protrusion encroaching on the left axillary sleeve and neural foramen at C5-C6 was observed. The neurologist diagnosed the patient with polyradiculopathy secondary to C2-C6 neuroforaminal spinal stenosis and was prescribed Carbamazepine ER for abnormal nerve sensations, Voltaren for inflammation, and rehabilitation to facilitate recovery and function. The rehabilitation program involved an integrated approach and was designed to control inflammation, provide symptomatic relief for radicular pain and muscular spasms, and to decrease cervical nerve root compressive forces. It consisted of physical agents, postural retraining, manual therapy, kinesiotaping to encourage correct posture, and therapeutic exercises to release tight structures and strengthen postural muscles. Status post four months his symptoms improved, but did not completely resolve. Participation was self-regulated and related to pain levels and neurologic deficits. Status-post six months his symptoms completely resolved. He was cleared for unrestricted activity. His return to swimming did not elicit any pain or neurologic deficits. **Uniqueness:** Most common clinical symptoms of polyradiculopathy are neck pain and unilateral arm pain accompanied by motor and sensory deficits. The prevalence of polyradiculopathy secondary to spinal stenosis increases with age and most commonly occurs at C6-C7 and in adults over 30-40. Furthermore, the patient is a post-pubescent athlete who developed early onset cervical spinal stenosis. Finally, only 2% of all cervical radiculopathies occur at C4-C5 or above. **Conclusions:** Polyradiculopathy refers to compression or damage of more than one spinal nerve root that produces pain and neurologic deficits. This occurs when the spinal column narrows and places pressure on multiple nerve roots. The lower cervical nerve roots (C5-C8) are most commonly involved. Various etiologies can result in pressure on one or more cervical nerve roots. In this case, the pathology was caused by neuroforaminal spinal stenosis secondary to overactivity. **Word Count:** 600