Biomechanical approach of cervical radiculopathy: Recovery of Cervical segmental function, cervical anterior approach and coordination of glenohumeral complex

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Cervical radiculopathy is defined as a syndrome of pain with sensorimotor deficits due to compression of a cervical nerve root. The patients with cervical radiculopathy show neck and arm discomfort of insidious onset. The discomfort can range from a dull ache to a severe burning pain. Typically, pain is referred to the medial border of the scapula, and the patient's chief complaint is shoulder pain. As the radiculopathy progresses, the pain radiates to the upper or lower arm and into the hand, along the sensory distribution of the nerve root that is involved. Before radiating pain, there might be neck pain or a history of cervical spine arthritis. These patients complain of increased pain with neck positions that cause foraminal narrowing (e.g., extension, lateral bending, or rotation toward the symptomatic side). Cervical examination is necessary to diagnose the patient with cervical radiculopathy. Provocative tests, for example spurling test and neck distraction test, are performed to provoke or worsen the symptoms in the affected arm. And if spurling test is negative, neuro-dynamic test and tinel test are practiced for differential diagnosis among PNS (peripheral nerve sensitization), Carpal tunnel syndrome and TOS (thoracic outlet syndrome). Many patients report that they can reduce their radicular symptoms by abducting their shoulder and placing their hand behind their head. This maneuver is thought to relieve symptoms by decreasing tension at the nerve root. Although a definitive treatment progression for treating cervical radiculopathy has not been developed, a general consensus exists within the literature that using manual therapy techniques are effective in regard to increasing function, as well as range of movement. If the range of motion is improved bio-mechanically in cervical segment and glenohumeral complex, the radiculopathy pain can be reduced within a short time. Therefore I suggest the bio-mechanical approach for cervical radiculopathy except for patients who is indicated with significant motor deficits, debilitating pain. There are 4 parts where symptoms appear. Recoveries of cervical segmental movement, cognitive reset, coordinating movement of glenohumeral joint and neural mobilization are more efficient to relieve the pain: 1. Cervical anterior approach; 2. Indirect treatment of cervical segment for cognitive reset; 3. Recovery of coordination movement about glenohumeral joint; 4. Neural mobilization (if peripheral nerve sensitization is diagnosed).

Biography

Kang Soon Sik, MD received his Diploma in Korean Medicine from Semyung University, South Korea in 2015, graduating *summa cum laude*. He works at public health center medical part. He will co-publish a book about bio-mechanical approach of primary medical care.

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