

Diagnosis and osteopathic manipulation of cervical vertebral spondylosis

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Abstract

Cervical spondylosis is a disease and there is abnormal wear on the cartilage and bone of the cervical spine. Also is a common cause of chronic neck pain.

Foreword

Cervical disease, also known as cervical syndrome .Cervical disease is cervical intervertebral joints (intervertebral disc ,
Luschka's joint ,facet joint) , is due to cervical disc degeneration,
cervical osteoarthritis of the spine and neck injuries caused by
internal and external imbalance, irritation or compression of

cervical nerve roots, vertebral artery, spinal cord or caused by a sympathetic group syndrome .

Causes

Everyday wear and tear and people who are very active at work or in sports may start these changes. There are other factors as follows can also make a person more likely to develop spondylosis.

- Overweight and do not exercise
- Heavy lifting or a lot of bending and twisting
- Neck injury for couple of years ago such as whiplash
- Spine surgery
- Ruptured or slipped disk
- Arthritis
- Small fractures to the spine from osteoporosis

The clinical syndromes and diagnosis

There are three types of cervical spondylosis , which is Type I Syndrome (Cervical Radiculopathy); Type II Syndrome (Cervical Myelopathy); and Type III Syndrome(vertebral arterial type); TypeIV Syndrome(sympathetic type). The clinically is neck and

arm pain, numbness, neck tenderness and radiating pain as the main performance and headaches(especially in the back of the head). More common by age 30 to 60 people. Also the nerve root type cervical spondylosis is the most common in each type of cervical spondylosis.

Type I Syndrome (Cervical Radiculopathy) :

Is the most common syndrome of cervical spondylosis and its clinical manifestations of neck pain with radiating upper extremity pain or weakness or numbness or damaged nerve root distribution of pain and temperature sensation and tactile change. The two most common sites are the C5–6 nerve root and the C6–7 nerve root.

C5 nerve root oppression is reflected in the deltoid, biceps muscle and supraspinatus muscle and infraspinatus muscle weakness and biceps tendon reflexes diminished. The clinically is shoulder pain and numbness and upper limbs difficulties to move.

C6 decreased brachioradialis reflex, weakness of the biceps muscle, pain and paresthesias radiating down the arm to the

thumb and index finger and fingertip. Sensory disturbances in the lateral border of forearm and part of the hand between the thumb and the index finger.

C7 nerve root oppression would cause triceps tendon reflexes diminished or disappeared and weakness of the triceps muscle and pain and paresthesias radiating to the middle finger.

Type II Syndrome (Cervical Myelopathy):

Rare but severe symptoms, the reason is cervical vertebrae degeneration and adjacent soft tissues (such as disc herniation, vertebral bone spurs, ossification of the posterior longitudinal ligament, yellow ligament hypertrophy or calcification, spinal stenosis) degeneration. Also spinal cord compression or irritation and accompanying vessels reflex sensory nerves of the spinal cord, spastic paralysis, and bowel dysfunction. The clinically is limbs feel numbness, weakness, and decreased activity and have a cotton feeling when walking.

Pathological reflexes such as Hoffmann's sign and Babinski's sign are also the important clinical manifestations.

Type III Syndrome (vertebral arterial type):

Supply of brain blood circulation vertebrobasilar oppression in cervical transverse hole. Stimulation or twisting may cause nausea, vomiting, dizziness, pallor, tinnitus, hearing loss, insomnia, memory loss, blurred vision , but vertigo is the main symptoms. Especially deterioration of symptoms when the head turned to the side or upward and mitigate of symptoms when the head turn back.

TypeIV Syndrome(sympathetic type):

The clinical symptoms can appear headache or migraine headaches, dizziness, nausea, vomiting, visual unclear, vague, decreased vision the pupil to expand or shrink back of the eye pain, rapid heartbeat, irregular heartbeat, chest pain, high blood pressure, abnormal sweating, and ringing in the ears, hearing loss, dysphonia, also can be expressed as blurred vision , tears, nasal congestion, bradycardia, blood pressure, flatulence .

Tests

Test the range of motion of the neck and find out if there's pressure on spinal nerves or spinal cord, test reflexes and check

the strength of muscles. Watching patient walk to see if spinal compression is affecting their gait. Also the Eaten test and Spurling test for the nerve root type of cervical spondylosis. Imaging tests such as X-RAY , CT , MRI ; Nerve function tests such as EMG and Nerve conduction velocity.

Manipulation treatment and osteopathic techniques

- Muscle energy techniques such as supine cervical extensors and supine lateral flexion and rotation and occipital area.
- The trigger point techniques
- Hydrotherapy

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