



Degenerative Disease of the Cervical Spine

Cervical spine degenerative disease is a common condition. Changes occur in the bones, ligaments and discs of the neck. The challenge to the neurosurgeon is selecting those patients who would benefit from surgical intervention rather than conservative management.

Symptoms and signs of cervical spine degeneration can be regarded as axial, radicular or myelopathic. While many diseases can cause neck and arm pain or spinal cord injury, by far the most common cause is a dysfunctional segment of the cervical spine.

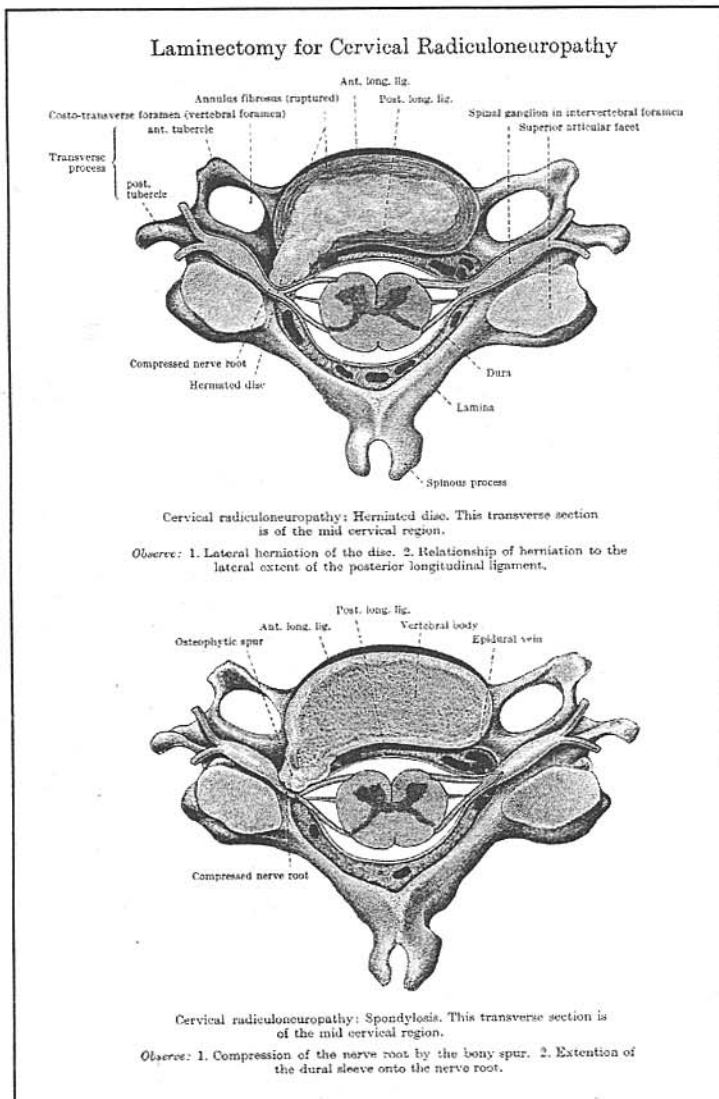
Axial complaints, that is, neck pain, are the most common symptom. It generally precedes or coexists with radicular pain in the arm from nerve root compression caused by a disc herniation. Up to one-third of the population has experienced severe neck pain with or without arm pain.

Radicular signs and symptoms are the hallmark of cervical disc herniation. Pain is the most common complaint and numbness in the limb and motor weakness can also be present. The onset is noted as a dull ache in the neck often first noted upon awakening. Frequently, no history of trauma is obtained. Classically, radicular arm pain will subsequently appear. Pain may be worse on lying supine, forcing the patient to sleep upright. Neck extension, rotation and Valsalva maneuver may worsen the pain. Raising the affected arm over the head may temporarily relieve the pain.

Myelopathy, signs of spinal cord compression, develops in only 5-10% of patients with degenerative disease of the cervical spine. However, because of the potentially devastating effects of spinal cord injury, it is essential to identify those patients who would benefit from surgical treatment early. The presence of long-tract signs represents the sine qua non for the diagnosis of myelopathy. Motor complaints such as weakness, spasticity or gait difficulties predominate. Hyper-reflexia, ankle clonus and upgoing toes are common on exam. Sensory complaints are usually minor. It is not unusual for non-surgical diseases like ALS and MS to cause similar signs and symptoms in patients. It is therefore important that patients undergo MRI scanning of the cervical spine early in their evaluation to identify those who would benefit from surgery. There is very little place for "watchful waiting" in these patients.

Nonsurgical treatment: Rest, medications, and physical therapy may aid in relieving symptoms. Medications usually include nonsteroidal anti-inflammatory agents, oral steroids and muscle relaxers as well as narcotic pain relievers. Occasionally, physical therapy or traction will aggravate the pain and should be discontinued. Many patients will improve on their own. Indications for surgery include persistent pain despite conservative treatment or neurological deficits such as weakness, sensory or reflex changes.

Surgery is most often performed from the front of the neck and sometimes from the back. The disc and/or bone spurs can be removed in order to remove pressure from the nerves or spinal cord. Patients spend one night in the hospital. In general, greater than 90% of patients get very good relief of arm and neck pain after surgery. Complication rates are extremely low. Patient satisfaction is very high. Usually only a soft cervical collar is required for about 4 weeks after surgery. Most patients return to full activity with no restrictions after surgery, enabling them to take control of their lives again.



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