ClinicalClues

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Identifying and Treating Cervical Spine Pathologies

Karol Young, OTD, OTR/L, CHT recently asked Jerry Ditz, DPT, Dip. Osteopractic, Cert. SMT, Cert. DN several questions about screening for cervical spine pathology.

Karol: What would you include in a cervical spine screen?

Jerry: My usual upper quarter screen consists of:

1. Postural assessment looking for asymmetry
2. Active Range of Motion (AROM) of cervical spine and both upper extremities to detect significant loss of motion or asymmetry
3. Bilateral muscle testing at nerve innervation levels from C1-T1, looking for differences in strength between the upper extremities (the wrist and hand are the easiest joints in which to notice a difference)
4. Bilateral reflex testing noting an absent reflex or dissimilar response
5. Sensory testing at dermatome levels C2-T1 for diminished light touch
6. Repeated motion testing (3 sets of 10 reps) of cervical protraction and retraction noticing increased or decreased pain symptoms in the extremities

If the results of these screenings are not adding up, I perform a full neurologic exam to gather more information on the central nervous system. This exam may also identify any fall risk.

Karol: Which cervical spine screen provides you with the most information?

Jerry: The patient performing repeated active cervical retraction while sitting gives me the most information. Symptom reduction with cervical retraction points to cervical involvement, suggesting cervical retraction will be a beneficial patient exercise. Secondly, patients who experience an immediate positive symptom change will be more compliant with therapy.



Karol: If your quick screen of the cervical spine is inconclusive what do you do next?

Jerry: I ask the patient if they suffer from headaches. If the response is "Yes," I take a more in-depth look at their cervical spine by:

1. Probing for tenderness or a trigger point in the upper cervical spine (C1-C2) that reproduces headache or arm pain
2. Looking for a difference in passive cervical rotation comparing left versus right
3. Accessing limitations in lateral glide of the upper cervical spine

A patient with headaches can often be successfully treated with spinal manipulation which can be performed in under one minute. (1) Before and after the manipulation, I assess the strength and pain of the involved joint and, if positive changes are noted, I

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continue to treat the cervical spine with manipulation during follow-up visits.

If the patient does not suffer from headaches, I apply mechanical traction for five minutes while checking grip strength to determine if the cervical spine is involved. An increase in grip strength or a positive change in the patient's symptoms during traction, determines if cervical traction becomes part of the patient's care plan.

1. *Dunning, James R., et al. "Upper cervical and upper thoracic thrust manipulation versus nonthrust mobilization in patients with mechanical neck pain: a multicenter randomized clinical trial." J Orthop Sports Phys Ther 42.1 (2012): 5-18.*

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