

## What's new in the literature: Nonspecific neck pain

**N**onspecific neck pain (NSNP)—neck pain without specific underlying disease—is a serious public health problem that has become a major cause of disability around the world. Each year, 27% to 48% of workers suffer NSNP.

Established risk factors include age, sex, genetics, smoking, and poor psychological health. Prognosis of NSNP appears to be multifactorial. Poor health, prior neck pain, poor psychological health, worrying, and passive coping are associated with poor prognosis.

### Assessment of NSNP

The Bone and Joint Decade 2000–2010 Task Force on Neck Pain recommends that patients seeking primary care for neck pain be triaged as follows:

- Grade 1—No signs of pathology and little or no interference with daily activities.
- Grade 2—No sign of pathology but interference with daily activities.
- Grade 3—Neurologic signs of nerve compression.
- Grade 4—Signs of major pathology.

### Diagnosis of NSNP

- Red flags, including suggestions of spinal cord compression, cancer, infection, inflammation, vascular insufficiency, severe trauma, or skel-

etal injury, should be excluded during history taking.

- Radiculopathy can be demonstrated by Spurling's, traction/neck distraction, shoulder abduction tests, or Valsalva's maneuver. Upper limb tension test can exclude radiculopathy.
- Diagnostic testing is not indicated in the initial assessment of grades 1 or 2 neck pain, while grade 3 may require elective investigation, and grade 4 requires immediate investigation.
- Reliable and valid self-assessment questionnaires, such as pain VAS, Neck Disability Index (most validated), and Whiplash Disability Questionnaire, can provide useful information for management and prognosis.
- In the ER, Canadian C-Spine Rule or NEXUS Low-Risk Criteria screening protocols for low-risk patients with blunt trauma to the neck are highly predictive in detecting cervical spine fracture.
- CT scans have better validity and utility in cervical trauma for high-risk ( $GCS \leq 14$ ) or patients with multiple injuries.
- MRI is the best method of imaging the spinal cord and nerve roots; however, 50% of all adults show cervical spine abnormalities. Degenerative changes are not typically associated with neck pain.
- All other assessment tools, such as surface electromyography, anesthetic facet or medial branch blocks, provocative discography, functional tests, and blood tests lack validity and utility.

### Treatment of NSNP

Certain management strategies can help in the short term. In the early stages of grade 1 or 2 neck pain, the task force recommends the following:

- Reassurance that no serious pathology exists and that development of spinal instability, neurological injury, or serious ongoing disability is unlikely.
- Promotion of timely return to normal daily activities.
- In cases of WAD, educational videos, mobilization, and exercises appear more beneficial than usual care or physical modalities.
- Not using spinal neck manipulation, massage therapy, TENS, thermal or ultrasound devices, or Botulinum toxin A injection, since effectiveness is inconclusive.
- Use of anti-inflammatory drugs, muscle relaxants, percutaneous neuromuscular therapy and mobilization, which are shown to be more effective than placebos.
- Exercise training, mobilization, and acupuncture, which are more effective in the short term than conventional medical care.

### For grade 3 neck pain

- Epidural and transforaminal corticosteroid injections for possible short-term pain relief, although injections and other invasive treatments have unclear benefits for neck pain without radiculopathy.
- Epidural or selective root injections with corticosteroids provide short-term improvement of radicular symptoms, but do not appear to decrease the rate of open surgery.
- Radiofrequency neurotomy, anterior cervical fusion, and cervical disc arthroplasty have not been proven effective for neck pain without radiculopathy or serious underlying pathology.
- Surgical treatment of cervical radiculopathy does not improve long-term outcomes, compared with

*Continued on page 154*

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*Continued from page 123*

- nonoperative measures; however, relatively rapid and substantial pain and impairment relief seem to be reliably achieved.
- Cervical disc arthroplasty for radicular symptoms shows similar early outcomes to anterior discectomy and fusion surgery; however, long-term viability has not been demonstrated. No evidence supports cervical disc arthroplasty for patients without primary radicular pain.
  - Surgical intervention for possible upper cervical ligamentous injury after whiplash exposure is not supported.

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*Continued from page 153*

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