Chronic Neck Pain

- Effect of Postural Stabilization Exercises in Combination with Cervical Stabilization Exercises on Craniovertebral Angle, Pain, Disability, and Quality of Life in Patients with Chronic Neck Pain: A Randomized Controlled Trial
- Prevalence and Risk Factors of Musculoskeletal Disorders Among Clinical Laboratory Technicians
- Comparing Injection Methods of Botulinum Toxin A for Cervical Dystonia: A Systematic Review
- An Uncommon Presentation of Crowned Dens Syndrome Without Systemic Inflammation
- Diagnostic Delays Are Common, and Classic Presentations Are Rare in Spinal Epidural Abscess
- Causal Effects of Artificially Sweetened Foods on Chronic Pain Mediated by Gut Microbiota: A Mendelian Randomization Study
- Trends of Sinusitis-Associated Orbital Cellulitis in Pediatric Patients: A Retrospective Cohort Review
- Extended Multicenter Study on the Postural Shirt for Women With Chronic Nonspecific Cervical Pain: A Randomized Crossover Clinical Trial

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Extensive research into potential sources of neck pain and referred pain in the upper extremities and head has shown that the cervical facet joints can be a potential pain source confirmed by precision, diagnostic blocks.

Study design: Systematic review and meta-analysis utilizing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist, quality assessment of the included studies, conventional and single-arm meta-analysis, and best evidence synthesis.

Objective: The objective of this systematic review and meta-analysis is to evaluate the effectiveness of radiofrequency neurotomy as a therapeutic cervical facet joint intervention in managing chronic neck pain.

Methods: Available literature was included. Methodologic quality assessment of studies was performed from 1996 to September 2021. The level of evidence of effectiveness was determined.

Results: Based on the qualitative and quantitative analysis with single-arm meta-analysis and Grading of Recommendations, Assessment, Development and Evaluations (GRADE) system of appraisal, with inclusion of one randomized controlled trial (RCT) of 12 patients in the treatment group and eight positive observational studies with inclusion of 589 patients showing positive outcomes with moderate to high clinical applicability, the evidence is level II in managing neck pain with cervical radiofrequency neurotomy. The evidence for managing cervicogenic headache was level III to IV with qualitative analysis and single-arm meta-analysis and GRADE system of appraisal, with the inclusion of 15 patients in the treatment group in a positive RCT and 134 patients in observational studies. An overwhelming majority of the studies produced multiple lesions.

Limitations: There was a paucity of literature and heterogeneity among the available studies.

Conclusion: This systematic review and meta-analysis shows level II evidence with radiofrequency neurotomy on a long-term basis in managing chronic neck pain with level III to IV evidence in managing cervicogenic headaches [1)].

The high prevalence of chronic persistent neck pain not only leads to disability but also has a significant economic, societal, and health impact.

The pain and stiffness usually gets better after a few days, and is not a sign of a more serious neck problem or underlying condition.

You can get a painful or stiff neck if you sleep in an awkward position, use a computer keyboard for a prolonged period of time, or even from sitting in a draught.

Anxiety and stress can also sometimes cause tension in your neck muscles, which can lead to pain in your neck.

However, there is often no obvious cause of neck pain and doctors will refer to it as 'non-specific'.

Classification

see Neck Disability Index.

Etiology

1. cervical spondylosis (including facet arthritis). This condition involves changes in the bones, disc or joints that are connected to the neck. The major cervical pain reasons are due to the wear and tear of the cartilages and bones, and thus are often found in ageing people.

2. cervical sprain: including whiplash-associated disorder

3. fracture of the cervical spine: with upper cervical spine fractures (e.g. odontoid), patients characteristically hold their head in their hands, especially when going from recumbent to the upright position

a) traumatic

b) pathologic(tumor invasion,rheumatoid arthritis)

4. occipital neuralgia

5. herniated cervical disc:

a) lateral herniated disc: if symptomatic, tends to produce more radicular symptoms in the UE than actual neck pain

b) central disc herniation: if symptomatic, tends to produce myelopathy, does not produce any neck pain whatsoever in many cases

6. abnormalities of the craniocervical junction:

a) Chiari 1 malformation

b) atlantoaxial subluxation

7. fibromyalgia: idiopathic chronic pain syndrome characterized by widespread nonarticular musculoskeletal pain, nodularity, and stiffness without pathologic inflammation. Possible link to neuroendocrine dysfunction. Afflicts 2% of the population, female:male ratio is 7:1. No diagnostic laboratory study. May be associated with psychiatric illness and multiple non-specific somatic complaints including malaise, fatigue, impaired sleep, GI complaints, and cognitive impairment

8. Eagle’s syndrome: elongation of the styloid process. Surgical resection can ameliorate the pain. Two variants:

a) typical variant:history of tonsillectomy.Pharyngeal pain, dysphagia, and otalgia

b) second variant:AKA carotid artery-styloid process syndrome.Carotidynia radiating into ipsilateral eye and vertex

Treatment

Whatever the cause of neck pain or a stiff neck, the advice is generally the same: carry on with your normal daily activities, keep active and take painkillers to relieve the symptoms. See below for some more specific advice.

Take regular doses of paracetamol, ibuprofen, or a combination of the two, to control pain – ibuprofen gel can be rubbed onto your neck as an alternative to taking tablets. Always follow the dosage instructions that come with the medication.

Sleep on a low, firm pillow at night – avoid using two pillows because it may force your neck to bend unnaturally.

Check your posture – bad posture can aggravate the pain and it may have caused it in the first place. Find out how to sit correctly.

Avoid wearing a neck collar – there is no evidence to suggest that wearing a neck collar will help to heal your neck, and it is better to keep your neck mobile.

Avoid driving until the pain and stiffness have gone – it may prevent you turning your head to view traffic.

Exercises

No high quality evidence was found, indicating that there is still uncertainty about the effectiveness of exercise for neck pain. Using specific strengthening exercises as a part of routine practice for chronic neck pain, cervicogenic headache and radiculopathy may be beneficial. Research showed the use of strengthening and endurance exercises for the cervico-scapulothoracic and shoulder may be beneficial in reducing pain and improving function. However, when only stretching exercises were used no beneficial effects may be expected. Future research should explore optimal dosage [2)].

Some people suddenly wake up one morning to find their neck twisted to one side and stuck in that

position. This is known as acute torticollis and is caused by injury to the neck muscles.

Torticollis can occur after long exposure to a cold draught, or after your neck has been in an unusual position.

Sometimes, neck pain is caused by the 'wear and tear' that occurs to the bones and joints in your neck. This is a type of arthritis called cervical spondylosis.

Cervical spondylosis occurs naturally with age. It does not always cause symptoms, although in some people the bone changes can cause neck stiffness. Nearby nerves can also be squashed, resulting in pain that radiates from the arms, pins and needles and numbness in the hands and legs.

Among multiple modalities of treatments prescribed in the management of neck and upper extremity pain, surgical, interventional and conservative modalities have been described. Cervical epidural injections are also common modalities of treatments provided in managing neck and upper extremity pain.

Case series

The clinical case series of patients treated by the senior author at a single tertiary care institution between September 2014 and April 2018 was reviewed. Patients were selected for inclusion if their primary symptom at presentation was axial neck pain without neurological deficits and if CT imaging revealed facet arthropathy of the cervical spine. These patients underwent radionucleotide imaging in the form of a planar 99mTc methylene diphosphonate (99mTc MDP) bone scintigraphy study. Those with a finding of radionucleotide tracer uptake at a location concordant with the facet arthropathy were selected to undergo posterior cervical instrumented arthrodesis of the affected levels. PROs were recorded at the time of surgical consultation (i.e., after nonoperative treatment) and at 6 weeks, 3 months, 6 months, and 1 year following surgery. These included neck and arm pain, the Neck Disability Index (NDI) and the 12-Item Short Form Health Survey responses.

A total of 11 patients were included in this retrospective case series. The average reported neck pain and NDI scores were high at baseline; 7.6 ± 2.3 and 37.1 ± 13.9 respectively. Twelve months after surgical intervention, a significant decrease in reported neck pain of -4.5 (95% CI -6.9, -2.1; p = 0.015) and a significant decrease in NDI of -20.0 (95% CI -29.4, -10.6; p = 0.014) was observed.

This case series represents the largest to date of patients undergoing surgical arthrodesis following a finding of facet arthropathy with a concordant positive radioisotope image study. These observations add support to a growing body of evidence that suggests the utility of radioisotope imaging for identification of a facetogenic pain generator in patients with primary axial neck pain and a finding of cervical facet arthropathy. These preliminary data should serve to promote future prospective, controlled studies on the incorporation of radionucleotide imaging into the workup of patients with suspected facetogenic pain of the cervical spine [3].

[1]
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