

regarding domestic violence very early in their medical school careers were no more likely to screen than their role models. Mandatory CME does not make a difference.

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Case report

Refractory torticollis after a fall

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Though multiple medical and psychiatric causes of torticollis have been described, cervical dystonias resulting from distant somatic dysfunctions have not. This article describes the treatment of a 62-year-old woman in whom refractory retro-torticollis of surmised pelvic etiology developed after a fall. Structurally, cervical dystonias have been addressed as problems that originate in the head and neck, but this limited view of the musculoskeletal component of torticollis may prevent physicians from directing osteopathic manipulative treatment to the underlying problem.

(Key words: torticollis, cervical dystonia, osteopathic manipulative treatment)

Spasmodic torticollis is a muscle dystonia characterized by a sustained movement of the head to one side. Variant dystonic states occur with the head flexed (anterocollis) or extended (retrocollis).¹ Though spontaneous remission occasionally occurs, torticollis is usually chronic. Current treatment of torticollis frequently includes the use of botulinum toxin and, rarely, surgery.¹⁻³ Torticollis is an indication for the use of osteopathic manipulative treatment (OMT) typically directed to cranial nerve XI (spinal accessory nerve),^{4,5} and a recent report of OMT in the emergency room described the focus of structural intervention for torticollis as being directed toward the cervicothoracic junction.⁶

This article describes a patient in whom a combination retrocollis/torticollis developed after a fall. The clinical history and treatment regimen are described, and the manipulative assessment and treatment of cervical dystonia is discussed.

Report of case

A 62-year-old female presented to the clinic complaining of right-sided neck and shoulder pain with restricted motion of 3 weeks' duration. The pain began gradually over a few days after a fall that occurred when the patient stepped into a 3-inch-deep hole with her left foot. The patient described falling forward with her left knee bent, arms outstretched. The left arm and shoulder received the brunt of the impact. She reported mild to moderate soreness in the left upper arm and shoulder, which steadily improved over the time that the right-sided neck and shoulder pain developed, and mild swelling and bruising of the left tibial tuberosity. By 96 hours after the fall, the patient had a constant pain that she described as dull and achy, but worsening in intensity upon flexion, left sidebending, or right rotation of the head. The pain radiated from the left occipital base, laterally to the left acromion. There was also mild pain on palpation of the

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left tibial tuberosity. She denied any radiation of pain, tingling, or sensory loss in the arms, as well as further lower extremity, back, or hip pain. She reported no dizziness or loss of consciousness before or after the injury.

The patient had had whiplash following a motor vehicle accident as a teenager, but she reported that this resolved with no recurrence. Another physician had seen the patient 5 days prior to her visit to the clinic. At that time, a radiograph of the left tibial tuberosity was obtained and revealed no abnormalities. The patient was prescribed cyclobenzaprine hydrochloride (10 mg every night) and was referred to our facility. The patient acknowledged that the medication assisted with sleep, but was not beneficial for pain relief.

The patient had a resting position of the head that was extended and rotated left of neutral position. Examination of the upper extremities revealed +2/4 brachial, radial, and ulnar pulses and +2/4 deep tendon reflexes of the triceps, biceps, and brachioradialis bilaterally. Passive range of motion was assessed in the cervical region to be 15° for right rotation compared to 80° for left, and 25° for flexion compared to 60° of extension. Musculoskeletal examination of the lower extremity revealed no gross deficit of strength, range of motion, or gait. The occipitoatlantal joint was extended, rotated right, and sidebent left, while in the lower cervical unit C3 through C5 were extended, sidebent, and rotated right. There was marked paraspinal tenderness in the cervical region, and tender points were palpated in the splenius capitis, superior and middle trapezius, and posterior scalene muscles of the right side. Somatic dysfunctions were not noted in the thoracic spine. Counterstrain, muscle energy, and general soft tissue techniques were performed and resulted in significantly increased right rotational (55°) and flexion (50°) motions in the cervical spine.

The patient had residual pain and tenderness immediately following treatment. Stretching techniques for the posterior neck and scalenes were demonstrated, and the patient was advised to perform

the stretches at least three times daily after applying heat to the area.

On her return to the clinic 7 days later, the patient reported 24 hours of post-treatment soreness followed by a return of normal motion to the neck. Over the next 48 hours, however, the patient's original symptoms gradually resumed. She returned to the clinic for a 1-week follow-up visit with little improvement. The patient again denied pelvic, back, lower extremity, or hip pains, and had no deviation from the previous physical examination of the upper extremity and neck. A more detailed study of the lower extremity and pelvis was undertaken. Left hip flexion was passively demonstrated to be 45° compared to 90° on the right. Low back pain was not elicited with flexion of either side.

Examination further revealed the same cervical dysfunctions and tender points that were observed 1 week earlier. The patient had a left posterior innominate, with no sacral or lumbar dysfunction. The pelvic dysfunction was treated by muscle energy. Soft tissue techniques and passive stretches of the left hamstrings were performed. The cervical somatic dysfunctions and tender points were treated using the same techniques that were performed the previous week. Hamstring stretches were demonstrated for the patient, who was advised to add these to her stretching regimen.

The patient returned to the clinic 4 days later describing the same relief of post-treatment soreness within 24 hours. At this visit she described little to no resumption of the dystonic symptoms. Active rotational motion was nearly normal (75° to the right and 85° to the left) with a slight deficit of passive flexion (55°), and the patient was able to comfortably maintain the head in a neutral position.

Examination revealed an occipitoatlantal joint extended, rotated right, and sidebent left, and tenderness of the cervical musculature. The pelvis was level, although left hip passive flexion was slightly decreased (80° left versus 90° right). OMT was performed on the cer-

vical dysfunction using muscle energy techniques. Soft tissue and stretching techniques were performed on the cervical musculature and hamstrings.

When contacted by phone 4 weeks later, the patient described no residual symptoms or pain since the final treatment, and stated that she felt she had been "cured."

Discussion

While the diagnosis of a cervical dystonia in this patient was obvious, the etiology of the pain was not easily deduced from the initial presentation. The fact that the resumption of the symptoms after the first treatment mirrored the history of the onset of the symptoms suggested an etiology beyond the cervical region. When the focus of treatment was widened to include a thorough assessment and treatment of the pelvis, a permanent resolution of the symptoms was attained. The involvement of the pelvis, however, was not suggested by the presenting symptoms. Acute pelvic dysfunctions typically result in back, hip, or lower extremity pain, none of which was indicated by the patient. Also, the patient did not have thoracic, lumbar, or sacral dysfunctions. Because subsequent manipulation of the pelvis resulted in a permanent improvement in range of motion, the pelvic dysfunction may have been the cause of the cervical dystonia.

The manipulative approach to torticollis has been well characterized and is directed toward the cervicothoracic junction as well as to the soft tissues in the neck.^{4,6} This approach, however, failed to permanently correct the problem in this patient. The pain was also refractory to muscle relaxants, as are many instances of torticollis.^{1,5} This is disturbing, as a recent article described the above methods as being the standard of care in an emergency department setting where the physician may not be equipped to follow the patient's progress beyond the few hours of the emergency visit.⁶ To prevent ineffective treatment and recurrent nonemergent visits to the emergency department, it is crucial that the causative etiologies be

treated in the emergency room. To this end, the authors suggest a more comprehensive approach when utilizing OMT for the treatment of cervical dystonias.

The mechanism for the dystonia in this patient is thought to arise from the posteriorly rotated innominate. While the actual mechanism by which the pelvis affected the cervical musculature is not known, the authors suggest several possible mechanisms, including increased dural tension or a functional short leg. Further studies focusing on the causative biomechanics of cervical dystonias may be indicated.

Given that many cases of torticollis are refractory to medication,⁵ it is advisable that osteopathic physicians consider noncervical etiologies, especially if manipulation of the cervical region is not effective in providing permanent pain relief.

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