Dynamic Chiropractic

CHRONIC / ACUTE CONDITIONS

Management of Torticollis (Wry Neck/Myositic Torticollis/Idiopathic Torticollis)

R. Vincent Davis, DC, PT, DNBPM

Torticollis is a scoliosis of the cervical spine that may be caused by a multiplicity of conditions. It presents as a rotational deformity of the cervical spine with secondary features which cause turning, tilting, and deformity of the neck and head. The more prolonged the clinical presence of the effects of the torticollis, the more resistant to a care regimen it becomes. This is generally due to the developing deformity in the individual osseous components of the cervical spine. Eventually, soft tissue contractures may develop. Although there are a number of etiological mechanisms which may be involved, this writing will deal with the myositic, or idiopathic, form as indicated.

Common causes of adult torticollis may include a muscle strain, a viral infection, a psychogenic mechanism, or a traumatic subluxation of a unilateral apophyseal joint. In the event of a ligamentous strain involving some degree of subluxation, motion is further limited by the protective action of the involved musculature. A common feature in the history of torticollis is the presence of limited or no clinicopathological/radiographic correlation between the degree of pain presented by the patient in the neck and the degree of radiographic arthritic changes. Should lymphadenitis be sufficiently advanced with very enlarged cervical lymph glands, in the event of a local infectious process, this might serve as a causative mechanism in which resolution of the infection could contribute to resolution of the torticollis.

The common wry neck which follows exposure to cold air current exposure is well-known to cause painful, tender cervical muscles. In the event the exposure is unilateral, the patient maintains the head in a position toward the side of the involved muscle in order to provide for a potential state of relaxation of that muscle.

The etiology of torticollis may be due to a unilateral facet subluxation or impingement. When completely extended, flexed or rotated, such a position places the posterior neck joints very close to a point of subluxation, prevented by ligamentous and capsular tissues which limit such movement. When such conditions of movement are exceeded, torticollis may occur as a result of rotatory subluxation. In the event of the abrupt turning of the head, especially with excessive turning involved, one or more pairs of facets may move past their normal range of motion. In passing this limit, excess stretching of the capsular tissue with elongation of the respective ligaments takes place. As a result of this excess motion, the articular surfaces lose their physical relationship, and are "jammed" together with the resultant separation of the anatomically opposite joints. As a result of capsular tearing and stretching and impingement along with traumatic edema of the synovium and capsular tissue, as well as neurothlipsis due to perifacet edema, there is unilateral narrowing of the intervertebral foramen with resultant pain.

Clinically, the presenting condition is diagnostically obvious with regard to the nosocomial label, and all that remains is to determine the etiology. Since this writing deals with the myositic form, which is

the most common, the therapeutic regimen will also deal with that entity.

Therapeutically, since the involved musculature is in severe spasm and, therefore, locally ischemic, moist or deep heat should be applied to enhance local arterial flow. This may be by the application of moist infrared therapy applied for 15 to 20 minutes p.r.n. for a sufficient time to obtain a low grade, mild hyperemia, with a mild increase in arterial flow. Shortwave diathermy may be applied locally with the use of no more than third- level heating at which time hypothalamically-induced reflex perspiring will begin. At this time, shortwave diathermy is withdrawn for that treatment session. This may be applied p.r.n. to obtain hyperemia and some increase in range of motion.

Many in physical medicine prefer continuous ultrasonic energy applied directly to the course of the involved muscle group at a setting of 0.50 W/cm^2 for 10 minutes, with a neutral coupling agent applied b.i.d. or p.r.n. to improve range of motion and reduce ischemia. The patient must be ordered to rest, preferably by recumbency and very passive, limited therapeutic exercising of the cervical spine ordered to assist in reducing the ischemia and enhancing the evacuation of cellular waste products. Gentle, nontraumatic manipulation of the cervical lesions may be performed at a point in this regimen where further trauma to the pericervical soft tissue is avoided. This author recommends the application of interferential current at some point in this regimen, preferably to assist in achieving pain-free range of motion, with suggested parameters of 120 Hz beat frequency and with careful placement of the electrodes for 10 minutes, b.i.d. or p.r.n. daily to enhance pain reduction and increase range of motion.

The treatment of this disorder may, occasionally, be very resistant and may require diagnostic research for etiological accuracy. However, diagnosis remains the sine que non of the treatment base in physical medicine, as in all fields of health care.

References

1. Cailliet R: Neck and Arm Pain, ed 2. F.A. Davis Publishers, 1980.
2. Davis RV: Therapeutic Modalities for the Clinical Health Sciences, ed 1. Copyright -- Library of Congress, Card #TXU 389-661, 1989.
3. Griffin JE, Karsellis TC: Physical Agents for Physical Therapists, ed 2. Springfield: Charles C. Thomas, 1982.
4. Krusen, Kottke, Ellwood: Handbook of Physical Medicine & Rehabilitation, ed 2. Philadelphia: W.B. Saunders Company, 1971.
5. Schriber WA: A Manual of Electrotherapy, ed 4. Philadelphia: Lea & Feibiger, 1975.
6. Turke: Orthopedics -- Principles and Their Applications, ed 3. Lippincott Publishers, 1977.

SEPTEMBER 1993