

Happy New Year: The Great Centennial Celebration Year

Last year, we ended with a note that we would look at excerpts from the new book, *Chiropractic Approach to Head Pain*. For the first time in modern-day chiropractic we have a book expertly dedicated to the ever inclusive subject of head pain. The list of contributors from Australia, Canada, England, and the United States offer new and keen insight into an area presently dominated by the interests of pharmacotherapy and surgery. Here is one excerpt of the many clinical gems taken from these experts:

Headache and head pain are among the most frequent conditions seen in chiropractic practice. Some sources rank these second only to back pain. As chiropractic grows, more and more patients will seek care for problems far beyond the stereotype of the "low back doctor." This is evidenced by increasing numbers of patients seeking care for temporomandibular joint problems, cervicogenic headache and migraine headache.

The following is taken (with permission) from Paul Chek's excellent and very thorough chapter, "Posture and Head Pain." In this excerpt, he discusses the appearance of ocular complaints in cervical syndromes.

"Ophthalmologic signs and symptoms are common complaints in cervical syndromes. Lloyd Mills, an ophthalmologist, and C.L. Lowman, an orthopedist, began noticing the connection between posture and ocular dysfunction prior to August 1915, at which time they began tracking their findings. It was quickly found that, among the cases which were without doubt primarily orthopedic, such as infantile paralysis, hip disease, tubercular disease of the spine etc., gross ocular muscle defects and irregular astigmatism, of notable degree, occurred in the proportion of about 3.2 to 1 when compared with the consecutive eye cases -- the comparable cases among which, almost without exception, were out of skeletal alignment. Although patients with remote lesions such as flat foot and hip disease noted improvement of eye symptoms with corrective treatment, complaints of cervicodorsal lesions were more frequent. These lesions were associated with activities that required head or shoulder girdle fixation (essential to the use of the hands in any finely coordinated work), or both, as essential to intense ocular fixation, thus putting strain on all the muscular and ligamentous attachments and structures involved in maintaining head balance and in fixing the shoulder girdle.

"Their finding of increased prevalence of ocular pain and dysfunction with cervicodorsal lesions, is concomitant with stress in the lower cervical/upper thoracic region in patients exhibiting forward head postures. The strain of forward head posture substantially increases the work of the cervical extensors, thus promoting trigger point development via postural strain. Anatomically, many of the cervical extensors originate in the lower cervical and upper thoracic region. As Travell and Simons demonstrate, many of these muscles, including the scapular retractors and levator scapula, refer pain into the cervicodorsal area. Not surprisingly, Cailliet demonstrates that the head increases its relative weight 10 lbs. per inch of forward migration.

"There are several mechanisms by which pain and dysfunction in this part of the spine may

aggravate the visual system. Guyton has shown the presence of sympathetic vasoconstrictor nerve fibers, in addition to the local tissue regulatory mechanism, in muscle. Approximately 8% of the nerve fibers in the average skeletal muscle are sympathetic fibers, which when maximally stimulated can reduce blood flow up to 75%. Trigger points in musculature producing referral zones anywhere that may influence the sympathetics between T1 & 2 (which influence circulation to the head and eyes) and C1, which is intimate to the superior cervical ganglion, affect the eyes through the internal division of the carotid plexus. Travell shows that high energy discharge from needle insertion into a trigger point ranged in frequency between 10 and 90/sec with amplitude greater than 1mV and a duration of 3-4 msec. These impulses have been shown not only to produce ischemia in the tissues of the reference zone, but in the cord itself.

"In accordance with the Arndt-Shultz law, which states 'weak stimuli increase physiologic activity and very strong stimuli inhibit or abolish activity,' a resultant of noxious referral may be disease in the intra and extra-ocular structures! Both Mills and Lowman cite several references of such cases to include projectile wounds to the cervicodorsal spine with frank ocular symptoms, such as acute glaucoma.

"There are multiple combinations of head postures resulting from leg length discrepancies, pelvic asymmetries, scoliosis, shoulder girdle imbalance, atlas subluxations, etc. The ideal position of the head is one in which the eyes are level with the horizon and the optic, otic and occlusal planes horizontal. If this position cannot be achieved, due to inadequate postural compensation, the eyes must compensate to maintain both horizontal gaze and binocular vision. It must be remembered that the muscles of the eye are skeletal muscle and respond to the stress of compensation as such. If the head position remains altered there will be postural stress/strain in the ocular muscles due to the compensation.

"Abnormal postural position of the head and shoulder girdle can facilitate ocular compensation through the sternocleidomastoid (SCM) and upper trapezius muscles, as well as the vestibular system. A bombardment of neural impulses arising from these muscles (via proprioceptive and/or nociceptive mechanisms) may arise by way of the cranial nerve nuclei from which they receive innervation. The impulses from these muscles are carried over the medial longitudinal fasciculus, a large fiber bundle receiving input directly from the nuclei of the accessory nerve, from which the SCM and upper trapezius receive innervation. As shown by Simons & Travell, excitation from trigger points in these muscles may cause blurred or double vision, and have been shown to refer pain to the contralateral side. This raises questions as to the ramifications of trigger point development in the eyes. Could altered muscle tone in the periocular muscles, secondary to trigger point development, distort vision?"

With each article I encourage you to write the questions you may have, commentaries on patient care, or thoughts to share with your colleagues to me at the following address. Please include a self-addressed, stamped envelope.

Darryl Curl, DDS, DC
2330 Golden West Lane
Norco, CA 91760

JANUARY 1995