Dynamic Chiropractic

HEADACHES & MIGRAINES

Ocular Problems and their Relevance

Did you know that poor alignment of the eyes can disturb one's posture and cause headaches? As far back as 1916, it was believed that the very common habit of tilting the head to one side is sometimes due to weak eyesight or an imbalance of the extraocular muscles (strabismus). More recently, through electromyography, it has been shown that strabismic patients demonstrated increased irritability from scalp and neck muscles. Thus, this can contribute to, or be a source of cervicogenic headache.

How Do the Eyes Influence Posture and Head Pain?

The extraocular muscles are heavily innervated and have one of the densest proprioceptor populations comparable to that of the neck muscles. In the eye and neck muscles, the density may reach up to 500 spindles per gram of muscle tissue! It is undoubtedly through this strong proprioceptive effect that eye movements influence posture. In other words, the direction of gaze plays a leading role in postural alignment.

What Is the Clinical Relevance?

From the above eye-opening information (I couldn't help the pun), it appears safe to conclude that there are some patients seeking treatment for postural faults who will benefit from a thorough eye examination.

What Types Of Postural Faults May Develop Following Ocular Problems?

The most common type of acquired postural fault is forward head posture (FHP) and it can result from poor vision or imprecise ocular alignment (strabismus). Unfortunately, FHP can, in turn, lead to a wide variety of changes in the cervical curvature.

Fortunately, one can often predict the change in the cervical curve. For instance, in patients who develop FHP as a consequence of the work environment in which they are seated with the eyes maintained predominantly at the horizontal plane, will most likely show an increased lordosis (e.g., truck drivers, deskworkers, office workers). The so-called "lazy posture" seen in adults and children particularly while sitting in school or watching TV will also promote a hyperlordosis of the C-spine.

When FHP is accompanied by long periods of cervical flexion a straight or reverse cervical curve typically develops. This, perhaps, is the most common disturbance in the cervical curve (as a result of eye problems) as there are a multitude of jobs that encourage this posture (e.g., parts manipulation or assembly, reading, computer work, secretarial work).

What Is the Clinical Relevance?

One of our colleagues, Dr. Scott Donkin, often points out that as the seated workplace continues to grow in popularity, so will the number of patients developing FHP. To stem the tide, Dr. Donkin stresses the importance of prevention! In fact, he's written a book about preventing postural stresses.

Another source of information and referrals is your local ophthalmologist. In my area I work with one of our local optometry schools. Together we are turning around some of the most stubborn head and neck pain patients.

Next month we will discuss some of the quick and informative ocular screening procedures which we easily can use everyday in our practice. We'll even decipher some of the technical terms commonly used by our optometric colleagues.

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 your return address):

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

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