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"PARAMEDIC PAINS" Ailments That Plague Paramedics

Part I: The Headache

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(Part I of a 4-Part Series)

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The headache is a common problem affecting Paramedics; the causes are many.

I would like to review the pathophysiology and conservative management of the most common of headaches—the tension headache—known also as cervical tension cephalalgia and suboccipital cephalalgia. I will exclude discussion of intracranial headaches or those associated with generalized disease processes.

PATHOPHYSIOLOGY

The functional importance of the musculoskeletal structure requires that particular attention be directed to the myofascial tissues as well as articular components.

In disorders of the myofascia, the pain and suboccipital muscle spasm must first be brought to terms.

The nerves in this particular region lie in very close proximity to the vertebral artery at its point of angulation, prior to entering the skull through the foramen magnum. These nerves are vulnerable to irritation from the myofascial attachment of the cervical musculature to the base of the skull, muscles through which they transverse. Neural discharge or firing from extra cranial tissues may result from abnormal psychological reactions mediated via muscular contraction.

SIGNS AND SYMPTOMS

It is generally accepted that stress may trigger headache attacks and that persons who deal with high anxiety situations are especially susceptible.

Frequently, the pattern of pain will be in the neck and suboccipital region, radiating up and over the vertex, completely over the entire posterior portion of the skull.

Headaches and neckaches may occur concurrently, are usually intermittent, and generally originate from the neck.

These types of headaches are not only influenced by position and activity, but can occur as a direct result of certain positions and activities. Localized symptomotology may include muscle tension and muscle stiffness. Persons may develop symptoms at the end of a shift, particularly if they were faced with a stress-filled night with little or no sleep.

It should be pointed out that this pattern can also occur when a person sleeps in an unsuitable position for a lengthy period of time.

EVALUATION

The area of complaint may be different from the actual site of nerve irritation.

Physical examination should include attempts to reproduce the pain by palpation and passive stretching of the myofascia.

Tender points at the occipitocervical junction may be revealed on palpatory examination. The Atlanto-Occipital junction may be remarkably fixed, and deep pressure palpatation may reporduce occipitoparietal paresthesia.

During examination, the person should be in a sitting position, as

relaxed as possible, with the head maintained in a forward-flexed position. Palpation of the occipitocervical junction will often illicit extreme tenderness.

Neurological examination will be unremarkable, with the exception of often active deep tendon reflexes. During a severe tension headache, one may be nervous and tense; tachycardia and mild hypertension may be present.

Although most cervical-occipital headaches have a mechanical basis, it is wise to remember that other causes must be excluded; eye strain, sinusitis, digestive disturbances, and neurological diseases must be ruled out.

TREATMENT

Therapy for this type of syndrome should include the use of manipulation, soft tissue massage, traction, and psychological support. Therapy should include combinations of modalities so as to reinforce each other in alleviating symptoms.

Musculoskeletal structure and function are governed by recognized mechanical principles in which weightbearing forces and factors of stress and strain have an important role. Manipulative therapy is well suited to the patient's needs as one of the essential modalities for managing the musculoskeletal components of cervical tension cephalalgia. Variations in treatment must be made in response to the person's reaction, which may vary.

MOTORIZED TRACTION (INTERMITTENT)

When muscle spasm is chiefly in the posterior cervical region, cervical region, cervical traction may be helpful. The pull should be in a thirty degree forward-glexion position, allowing the posterior joints to open. Intermittent cervical traction stretches the posterior cervical musculature, thus improving mobility. It has been my experience that by placing a cold-pak under a patient's neck during traction relieves pain due to its decongestive physiological action and anesthetic effect.

MANUAL TRACTION TECHNIQUE

Prior to manipulation, a manual traction manuever may be useful in stretching cervical posterior muscles, and mobilizing upper cervical spinal joints.

Your doctor may place his forearm under the cervical spine, hand flat on the table, and using the right hand, exert pressure on the forehead, the right hand remaining immobile in order to exercise counterpressure. The left hand is cupped against the table, and slowly the elbow is raised.

This gently bends the head to one side in combined extension, and lateral flexion. Position is maintained for a moment and then released. Position is maintained for a moment and then released. This procedure is repeated several times, since it very frequently reduces pain by stretching and relaxing rigid muscles.

MANIPULATION TECHNIQUE

Well selected and correctly performed manipulation constitutes an appropriate theraputic solution. It should be specific. The effort should be directed toward the articular derangement at the site of muscle contracture.

Muscle spasm is usually secondary to mechanical disturbances, but may outlast them, thus maintaining a pain-generating cycle. Effective manipulation stretches the involved structures, producing a sudden, limited traction of contracted muscles and other elements of the joints. This stimulates the corresponding proprioceptors and induces a reflex action.

This technique attempts to interrupt a pain cycle, correct the articular lesion and alleviate symptoms.

PSYCHOLOGICAL FACTORS

Physical and emotional exhaustion, increased stress and anxiety all play a part in this subject. Irritability by a paramedic suffering from this syndrome can result in behavioral changes that may give rise to impaired performance, less sensitivity to patient needs, irritability towards others, and a "corky" disposition. ■

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