CERVICAL (NECK) PAIN

The neck is a structure lying between the atlanto-occipital joint and the first thoracic vertebrae. The head tops the neck with the shoulder structures providing its base. It normally has a lordotic curve (concave from back to front when viewed in profile), though this may be altered by external trauma. Whiplash injuries have been known to result in a flattened or reversed the lordotic curve. The seven cervical vertebrae are designed to allow 45° of flexion and hyperextension, and 45° of lateral flexion, and 60° of rotation.

The various neck muscles provide voluntary movement of the neck. Anteriorly, the pair of sternocleidomastoideus muscles is the most important, causing both flexion and rotation. The accessory (helper) muscles include the longus capitis, longus colli, and rectus capitis anterior, as well as the infrahyoid and the scaleni muscle groups. Posteriorly, the major muscles that cause rotation, extension, and hyperextension include the upper trapezius, semispinalis capitis, splenius capitis, and splenius cervicis. Accessory muscles which help these actions include the multifidus, obliquus capitis superior, obliquus capitis inferior, rectus capitis posterior major, rectus capitis posterior minor, and the levator scapulae muscles.

Other major neck structures include the esophagus, trachea, larynx, thyroid and parathyroid glands, the carotid and vertebral arteries, the brachial plexus nerves and the nodi cervicales (lymph glands). The minor structures (though no less important) include the numerous nerves, blood vessels, and lymphatic tracts that are varied in size (the smaller bifurcating from the larger).

Neck pain may arise from any of the above structures, including the vertebral joints if they are traumatized or inflamed. Inflaming trauma sources include bacterial infection, burns, localized viral infection, adhesions, or excessive mechanical stress. Psychoneurogenic or pathogenic neuromuscular dysfunction that results in extrafusal or intrafusal muscle spasm or hypertension (anxiety reaction, torticollis, or emotional tension) may also cause neck pain. Additionally, pain may also be referred into the neck area from visceral organs, nerve root compression or, more commonly, from trigger points.

The most common neck injury is the *whiplash* injury.

Treatment

Treatment of cervical pain must be directed at the particular treatable causes that have been identified as being responsible for the pain.

Trigger Points

The following trigger point formations may, singly or in combination, refer pain into the cervical area: Masseter (deep), Posterior digastric, Upper trapezius [A],Posterior cervical group, Sternocleidomastoideus (superficial fibers), Sternocleidomastoideus (deep fibers), Levator scapulae, Lower splenius cervicis, Upper trapezius [B], Lower trapezius [A], and Cervical-multifidus-(C4-C5).