LETTER TO EDITOR **Volume 2 (Issue 2), 2013 | Page No. 03-04**

T4 Syndrome: The Pain in Neck That Is Often Misdiagnosed!

To the Editor,

It has been ascertained that musculoskeletal issues arising from the upper thoracic spine are often incorrectly diagnosed as cervical in nature, by both the therapists and the medical professionals equally. This may be due to the reason that the lower cervical and upper thoracic vertebrae are closely linked with regards to cervical movements, predominantly, flexion, and extension. Symptoms from the upper thoracic spine can also bring up pain in the arm and forearm, thus, mimic a heart attack[1]. One such condition of upper thoracic spine is of T4 vertebra - the T4 syndrome. In 1994, Evans P, discussed the basic science behind the genesis of T4 syndrome and argued that, the term upper thoracic disorder might be a more accurate term, in view of the fact that, the condition generally ranges between T1 to T72. However, it is generally referred to as T4 or T3 syndrome3. If we examine the vertebral column, the compressive load at T1 is about 9% of body weight, increasing to 33% at T8 and 47% at T124. In between each one of these vertebrae, lie the facet joints and discs, which help in maintaining the weight and directing the movement among the individual vertebrae. When either of these joints gets injured, damage in turn can be imposed on the nerves and the T4 vertebra is most prone to destruction. This is due to the nature of its position, whilst performing certain movements[5]. Although the cause of T4 syndrome remains vague, it is hypothesized that sustained or poor postures can lead to relative ischemia within multiple tissues adding to symptoms of sympathetic origin2. Unlike somatic referred symptoms, the symptoms deriving from sympathetic nervous system are thoroughly different and refer towards head and upper extremities6. Thus, it gives a glove-like presentation. Symptoms may not be exclusively derived from fourth vertebra but may arise from other upper vertebra as well6. Hence, T4 syndrome may well be entitled as upper thoracic syndrome. According to a study published in the Journal of Manipulative and Physiological Therapeutics, nocturnal or early morning paresthesia, numbness, or upper extremity pain presenting in a glove-like distribution, with a stiff upper thoracic spine coupled with headaches and without neurological indication of disease, may be indicative of T4 syndrome[7]. Another study in 2006, in the same journal contributed upper extremity coldness, tightness, and deep aching pain to the clinical features of this syndrome[6]. The research conducted by de Franca and Levine revealed that, manipulation of the dysfunctional upper thoracic segments may relieve these symptoms[7]. For this reason, it is suggested that, when a patient presents with neck pain, the thoracic spine should also be considered as a potential contributing factor to the pathology. Since quality information concerning T4 syndrome is lacking[3], there is a crucial need to raise the awareness regarding this syndrome. Therefore, it is proposed to the researchers reading this letter, to focus their attention over this subject as well, so that it should no longer be misdiagnosed.

Ms. Sadaf Shafqat
Lecturer
Ziauddin College of Physical Therapy
Ziauddin University

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