

The possible use of ultrasonography for the diagnosis of myofascial neck pain

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A definitive diagnosis of chronic neck pain (CNP) is sometimes not possible. The aim of this study was to understand the possible role of the deep fasciae in CNP and the utility of the ultrasonography in the diagnosis of myofascial neck pain.

The morphometric and clinical data of 25 healthy subjects and 28 patients with CNP were compared. For all subjects, the active and passive cervical Range Of Motion (ROM) was analysed and the Neck Pain Disability Questionnaire (NDPQ) was administered. The fascial thickness of the sternal ending of the sternocleidomastoid and medial scalene muscles was also analysed by ultrasonography.

There were significant differences between healthy subjects in the thickness of the upper side of the sternocleidomastoid fascia and the lower and upper sides of the right scalene fascia. Analysis of the thickness of the sub-layers showed a significant increase of the loose connective tissue inside the fascia, rather than of the fibrous sublayers.

The data support the hypothesis that the loose connective tissue inside the fasciae plays a significant role in the pathogenesis of CNP. In particular, the value of 0.15 cm of the SCM fascia was considered as a cut-off value which allows the clinician to make a diagnosis of myofascial disease in a subject with CNP. The variation of thickness of the fascia correlated with the increase in quantity of the loose connective tissue but not with dense connective tissue, and probably more specifically with hyaluronan.

Key words

Fascia, myofascial pain, ultrasonography, neck pain, hyaluronan.