

The aim of this study was to assess fatty infiltration and asymmetry of the multifidus (MF), semispinalis cervicis (SCer), semispinalis capitis (SCap), and splenius capitis (SPL) muscles in patients with degenerative cervical myelopathy (DCM), and evaluate their correlations with clinical symptoms and functional scores.

Cervical muscle alterations have been reported in patients with chronic neck pain, but the assessment of cervical muscle morphology has been overlooked in patients with DCM.

Thirty-eight patients diagnosed with DCM and spinal cord compression at C4-C5 or C5-C6 (first level of compression) were included. Cervical muscle measurements of cross-sectional area (CSA) and ratio of functional CSA (fat-free area, FCSA) to total CSA were obtained from T2-weighted axial images at the level above, same, and level below the most cranial level of spinal cord compression. Muscle fatty infiltration and asymmetry was assessed at every level and their associations with respect to clinical signs and symptoms and functional scores were investigated.

There was a significant increase in fatty infiltration (decrease in FCSA/CSA ratio) of the MF ($P=0.001$) and SPL ($P<0.001$) muscles at the level below the spinal cord compression. A significant increase in MF CSA asymmetry was also observed at the level below the compression. Lower MF FCSA/CSA ratio was associated with longer 30-m walking test time. Lower SCer FCSA/CSA was associated with corticospinal distribution motor deficits and atrophy of the hands. Greater asymmetry in SCap CSA was associated with higher Neck Disability Index (NDI) scores, whereas lower asymmetry in MF CSA was associated with a positive Hoffman sign and weakness.

A significant increase in muscle fatty infiltration and CSA asymmetry at the level below the compression was observed in patients with DCM. Our results also suggest an association between cervical muscle morphology and DCM clinical symptoms and functional status ¹⁾.

¹⁾

Fortin M, Dobrescu O, Courtemanche M, Sparrey CJ, Santaguida C, Fehlings MG, Weber MH. Association Between Paraspinal Muscle Morphology, Clinical Symptoms, and Functional Status in Patients With Degenerative Cervical Myelopathy. *Spine (Phila Pa 1976)*. 2017 Feb 15;42(4):232-239. doi: 10.1097/BRS.0000000000001704. PubMed PMID: 28207658.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=muscle_fatty

Last update: **2024/06/07 02:49**

