Neurogenic atrophy of suboccipital muscles after a cervical injury: a case study.

Andary MT, Hallgren RC, Greenman PE, Rechtien JJ.

Department of Physical Medicine and Rehabilitation, Michigan State University, East Lansing 48824, USA.

This case report describes abnormalities in bilateral rectus capitis posterior minor muscles in one individual with persistent head and neck pain. These findings are muscle atrophy, fatty infiltration on magnetic resonance imaging, and electromyographic abnormalities compatible with denervated muscle. The objective of the study contained herein was to determine if fatty infiltration on magnetic resonance imaging of the rectus capitis posterior minor muscle is the result of disuse or denervation. Electromyography and magnetic resonance imaging data were collected from normal and atrophied muscles. Electromyography and magnetic resonance imaging abnormalities compatible with denervation atrophy were detected. Although we cannot rule out aging or other unknown causes, we suspect that denervation is caused by nerve damage from trauma to the C1 dorsal ramus as a consequence of entrapment within the rectus capitis posterior major muscle.