Paraspinal muscle

The muscles next to the spine are called the paraspinal muscles. They support the spine and are the motor for movement of the spine.

There are many small muscles in the back. Each controls some part of the total movement between the vertebrae and the rest of the skeleton. These muscles can be directly injured, such as when you have a pulled muscle or muscle strain. They can also cause problems indirectly, such as when they are in spasms after injury to other parts of the spine.

A muscle spasm is experienced when your muscle tightens up and will not relax. Spasms usually occur as a reflex (meaning that you cannot control the contraction). When any part of the spine is injured-including a disc, ligament, bone, or muscle-the muscles automatically go into spasm to reduce the motion around the area. This mechanism is designed to protect the injured area.

Muscles that are in spasm produce too much lactic acid, a waste product from the chemical reaction inside muscle cells. When muscles contract, the small blood vessels traveling through the muscles are pinched off (like a tube pinched between your thumb and finger), which causes a build up of lactic acid. If the muscle cells cannot relax and too much lactic acid builds up, it causes a painful burning sensation. The muscle relaxes as the blood vessels open up, and the lactic acid is eventually washed away by fresh blood flowing into the muscle.

Paraspinal muscle denervation is one of the essential elements in the pathophysiology of Chiari I malformation (CMI)/syringomyelia-related scoliosis. Although posterior fossa decompression (PFD) has been widely used for managing CMI, whether denervation of the paraspinal muscles may benefit from this neurosurgical procedure remains ambiguous. Bax and Bcl-2 are two regulators of apoptosis that are closely related to the innervation status of skeletal muscles, and denervation is associated with upregulated Bax and downregulated Bcl-2.

In patients with CMI, treatment with PFD led to a decrease in the Bax/Bcl-2 ratio at both the mRNA and protein levels, indicating an attenuated susceptibility to apoptotic cell death. These data, coupled with the observed improvements in histopathological features of the myofibres, suggest that PFD in Chiari I ameliorates denervation of the paraspinal muscles [1)].

Paraspinal muscle fatty

Paraspinal muscle fatty

Lumbar paraspinal muscle

see Lumbar paraspinal muscle

1)

Sha S, Li Y, Qiu Y, Liu Z, Sun X, Zhu W, Feng Z, Wu T, Jiang J, Zhu Z. Posterior fossa decompression in

Chiari I improves denervation of the paraspinal muscles. J Neurol Neurosurg Psychiatry. 2017 Mar 4. pii: jnnp-2016-315161. doi: 10.1136/jnnp-2016-315161. [Epub ahead of print] PubMed PMID: 28259858.

From:
https://neurosurgerywiki.com/wiki/ - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=paraspinal_muscle

Last update: **2024/06/07 02:51**