S100B in Neurovascular compression syndrome

Cerebrospinal fluid levels of nerve tissue-related markers involved in this disorder have not yet been reported.

Ito et al. measured cerebrospinal fluid levels of S100B protein, neuron-specific enolase, and myelin basic protein in 21 patients with trigeminal neuralgia, 9 patients with hemifacial spasms, and 10 patients with non-ruptured intracranial aneurysms (control). Cerebrospinal fluid levels of these markers were determined using commercially available assay kits.

Both trigeminal neuralgia and hemifacial spasm groups showed significantly increased cerebrospinal fluid levels of S100B compared with the control group (1120 [IQR 391-1420], 766 [IQR 583-1500], and 255 [IQR 190-285] pg/mL, respectively; p = 0.001). There were no statistically significant differences in cerebrospinal fluid levels of neuron-specific enolase or myelin basic protein among the groups.

Cerebrospinal fluid S100B levels were significantly higher in patients with trigeminal neuralgia and hemifacial spasm than in controls, which suggests the involvement of S100B in the underlying pathophysiology of neurovascular compression syndrome [1].

1)
Ito E, Seki Y, Saito K, Saito R. Increased cerebrospinal fluid S100B protein levels in patients with trigeminal neuralgia and hemifacial spasm. Acta Neurochir (Wien). 2022 Dec 2. doi: 10.1007/s00701-022-05434-0. Epub ahead of print. PMID: 36459237.