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].

Tu et al. used resting-state functional magnetic resonance imaging with regional homogeneity (ReHo) analysis to investigate changes in spontaneous brain activity of patients with hemifacial spasm HFS and to determine the relationship of these functional changes with clinical features. Thirty patients with HFS and 33 age-, sex-, and education-matched healthy controls were included in this study. Compared with controls, HFS patients had significantly decreased ReHo values in left middle frontal gyrus (MFG), left medial cingulate cortex (MCC), left lingual gyrus, right superior temporal gyrus (STG) and right precuneus; and increased ReHo values in left precentral gyrus, anterior cingulate cortex (ACC), right brainstem, and right cerebellum. Furthermore, the mean ReHo value in brainstem showed a positive correlation with the spasm severity ($r = 0.404$, $p = 0.027$), and the mean ReHo value in MFG was inversely related with spasm severity in HFS group ($r = -0.398$, $p = 0.028$). This study reveals that HFS is associated with abnormal spontaneous brain activity in brain regions most involved in motor control and blinking movement. The disturbances of spontaneous brain activity reflected by ReHo measurements may provide insights into the neurological pathophysiology of HFS. [2].

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.

2)
Tu Y, Wei Y, Sun K, Zhao W, Yu B. Altered Spontaneous Brain Activity in Patients with Hemifacial Spasm: A Resting-State Functional MRI Study. PLoS One. 2015 Jan 20;10(1):e0116849. doi: 10.1371/journal.pone.0116849. eCollection 2015. PubMed PMID: 25603126.