

THE MRI VOLUMETRY OF THE POSTERIOR FOSSA AND ITS SUBSTRUCTURES IN TRIGEMINAL NEURALGIA: A VALIDATED STUDY

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Purpose: Our aim was to determine whether the anatomical configuration of the posterior fossa and its substructures might represent a predisposition factor for the occurrence of clinical neurovascular conflict in trigeminal neuralgia (TN).

Methods: We used MRI volumetry in 18 patients with TN and 15 controls. The volume of the pontomesencephalic cistern, Meckel's cave and the trigeminal nerve on the clinical and non-affected sides was compared. The reliability has been assessed in all measurements.

Results: The posterior fossa volume was not different in the clinical and control groups; there was no difference between the affected and non-affected sides when measuring the pontomesencephalic cistern and Meckel's cave volume either. The volume of the clinically affected trigeminal nerve was significantly reduced, but with a higher error of measurement.

Conclusions: We did not find any association between the clinical neurovascular conflict (NVC) and the size of the posterior fossa and its substructures. MRI volumetry may show the atrophy of the affected trigeminal nerve in clinical NVC.

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