

Poster presentation

Neurophysiological investigations in Trigeminal Neuralgia

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Background

Trigeminal Neuralgia (TN) is a chronic neurological condition which is characterised by severe episodic facial pain. There are two main presentations of TN, the classical and the atypical. The classical TN is characterised by short periods of stabbing pain which are associated with a small trigger zone and remits for varying periods. The atypical presentation has prolonged periods of burning pain, with a constant discomfort between attacks and a sensory impairment.

Materials and methods

The main aim was to show if there are quantifiable differences between classical and atypical TN. A systematic literature review was conducted, using relevant key words across major medical databases. All selected articles were scrutinized independently by the authors, in order to decide on each study's scientific merit, rigor of method and results.

Results

Twenty three 23 studies were identified, eighteen of which were included for analysis. These eighteen studies included clear observational and measurement descriptions of any activities recorded i.e. morphology, frequency, amplitude and peak latencies. Most studies used non-parametric tests like the Mann-Whitney test to determine whether there is any significant difference between symptomatic and quiescent states in each presentation group, and ANOVA to investigate whether there was any

significance differences between each presentation in each state.

Conclusions

With regards to patients with the classical TN, spontaneous action potentials are seen from recordings in the trigeminal ganglion and "irritable" activity from the direct nerve recordings from the root entry zone. In patients with atypical TN, there does not exist a typical finding from each recording performed, while spontaneous activity is seen from the ganglion in both symptomatic and quiescent.

References

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