

What is an Abstract?

WHAT IS AN ABSTRACT?

- a brief summary of an information source/work
(source/work exs : book, journal article, website, multi-media)
- is used to help the reader quickly ascertain the source's purpose and conclusion
- if used, it will appear at the beginning of the work

Functional brain imaging of trigeminal neuralgia.(Report).

European Journal of Pain 15.2 (Feb 2011): p.124(8).

Abstract:

We used functional magnetic resonance imaging (fMRI) to analyze changes in brain activity associated with stimulation of the cutaneous trigger zone in patients with classic **trigeminal neuralgia** (CTN).

Fifteen consecutive patients with CTN in the second or third division of the nerve, were included in this study. The fMRI paradigm consisted of light tactile stimuli of the trigger zone and the homologous contralateral area.

Stimulation of the affected side induced pain in seven patients, but was not painful in eight patients on the day of the experiment. Painful stimuli were associated with significantly increased activity in the spinal trigeminal nucleus (SpV), thalamus, primary and secondary somatosensory cortices (S1, S2), anterior cingulate cortex (ACC), insula, premotor/motor cortex, prefrontal areas, putamen, hippocampus and brainstem. Nonpainful stimulation of the trigger zone activated all but three of these structures (SpV, brainstem and ACC). After a successful surgical treatment, activation induced by stimulation of the operated side was confined to S1 and S2.

Our data demonstrate the pathological hyperexcitability of the trigeminal nociceptive system, including the second order trigeminal sensory neurons during evoked attacks of CTN. Such sensitization may depend on pain modulatory systems involving both the brainstem (i.e. periaqueductal gray and adjacent structures) and interconnected cortical structures (i.e. ACC). The fact that large portions of the classical 'pain neuromatrix' were also activated during nonpainful stimulation of the trigger zone, could reflect a state of maintained sensitization of the trigeminal nociceptive systems in CTN.

NOTE: Actual length of article = 8 pages