

Sphenopalatine Ganglion Radiofrequency Ablation for the Management of Refractory Chronic Cluster Headache

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Abstract

Background

Percutaneous radiofrequency ablation of the sphenopalatine ganglion was shown before to improve chronic cluster headache. We were interested to examine the effect of such intervention in patients with refractory chronic cluster headache who failed pharmacological management.

Methods

Sixteen patients with refractory chronic cluster headache, who experienced temporary pain relief following sphenopalatine ganglion block, underwent

percutaneous radiofrequency ablation of the sphenopalatine ganglion via the infrazygomatic approach under fluoroscopic guidance.

Collected data include demographic variables, onset and duration of the headache, mean attack intensity, mean attack frequency, and pain disability index before and up to 18 months after procedure.

Results

At 1-, 3-, 6-, 12-, 18-month follow-up, the mean attack intensity was 2.8, 3.3, 3.3, 3.5, and 4.3, respectively ($P < .0001$, $P < .0001$, $P < .0001$, $P < .0005$, $P < .003$, respectively).

The pain disability index improved from 60 (baseline) to 18 and 26 at 6 and 12 months, respectively ($P < .001$) respectively ($P < .001$).

The mean attack frequency improved from 15 attacks/week to 5.5, 6.5, 8, 8.8, 8.65, at 1-, 3-, 6-, 12-, 18-month follow-up visits ($P < .0001$, $P < .0001$, $P < .0001$, $P < .002$, $P < .004$, respectively).

Conclusion

Percutaneous radiofrequency ablation of the sphenopalatine ganglion is minimally invasive, safe and effective procedure with a low complication rate for the treatment of refractory chronic cluster headache in clinical practice.

Key words: cluster headache, sphenopalatine ganglion, radiofrequency ablation.