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Clinical Correspondence

Radiofrequency Ablation of the Sphenopalatine Ganglion for Hemicrania Continua: The Second Case Report of a Long-Term Pain-Free Response

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Hemicrania continua (HC) is a rare primary headache disorder characterized by a strictly unilateral headache which is usually constant, absolutely responsive to therapeutic doses of indomethacin, and may persist for many years. Unfortunately, indomethacin is poorly tolerated and has significant long-term adverse events including gastrointestinal, renal, and cardiac in up to 50%.[1] Other preventive medications such as topiramate are much less effective and may also cause adverse events.[2] Other safe and effective alternatives are needed.

A 47-year-old male was seen in December, 2015 with a headache which had been daily and constant since onset in July, 2015 described as a behind the left eye, left cheek, and left side of the head aching and stabbing with an intensity ranging from 5-10/10 associated with light and noise sensitivity, tearing of the left eye, blurred vision, and congestion of the left nares when intense but no nausea, redness of the eye. He had exacerbations of pain twice an hour with an intensity of 10/10 for 10 minutes. MRI of the brain without and with contrast was normal. Past medical history of a drug induced seizure, kidney stone, and medullary thyroid carcinoma postoperative. Neurological examination was normal. MRI of the brain without and with contrast was normal.

He had seen another neurologist first. Gabapentin prescribed for cervical radiculopathy was not effective. He was started on indomethacin in September, 2015 with complete relief on 50 mg tid but his blood pressure was elevated and the dose was decreased to 25 mg tid and he reported the headache was 97% gone with an intensity of no more than 1/10.

On follow-up on September 12, 2016, the headaches had been very occasional and brief on indomethacin 25 mg bid. He was concerned over possible adverse events with long-term use of indomethacin. Topiramate was not started with the history of a kidney stone. He was referred to a pain physician to consider a radiofrequency procedure after the author read Beams et al study.[3]

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He underwent 3 SPG blocks as follows: November, 2016 with relief for 10 days; December, 2016 without benefit; and May, 2017 with relief for 3 weeks. He restarted indomethacin 25 mg bid when the pain recurred each time after the blocks.

He underwent a left SPG radiofrequency ablation on August 31st, 2017 without adverse events with complete resolution of the headaches. At last contact on April 26th, 2020, he was still pain free.

To my knowledge, based upon a PubMed and Google Scholar search, there is only 1 other similar case report. Beams et al reported a 47-year-old male with a 27-year history of right sided HC with cranial autonomic symptoms associated with exacerbations completely responsive to indomethacin 75 mg tid.[3] Indomethacin was discontinued due to significant lower extremity edema. He did not respond to other medications. A diagnostic right sphenopalatine block (SPG) provided complete anesthetic phase pain relief. He underwent radiofrequency ablation of the SPG and was pain free at his 2.5-year follow-up. He had ipsilateral palatal numbness following the procedure that resolved over several months.

Beams et al[3] chose their patient for SPG ablation based upon cranial autonomic symptoms with exacerbations as was present in this case. It is not known whether this is predictive of response. A series of 39 cases of HC found cranial autonomic symptoms present during exacerbations in 97%.[4]

SPG radiofrequency ablation can result in temporary and rarely permanent hypoesthesia or dysesthesia of the palate, maxilla, or posterior pharynx.[5]

Beams et al also reported 1 case of C2 ventral ramus and 2 cases of C2 dorsal root ganglion radiofrequency ablation with long-term relief. Weyker reported complete long-term relief after radiofrequency ablation of the supraorbital nerve in 3 patients with HC.[6]

Larger studies of radiofrequency ablation of the SPG and other sites are needed to confirm efficacy and safety and to determine if there are individual factors to select patients for ablation at specific sites.

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