Sphenopalatine Ganglion Block in Primary Headaches: An American Headache Society Member Survey

**Background** The sphenopalatine ganglion (SPG), in the pterygopalatine fossa, is a known current and historical target for therapeutic intervention in headache disorders because of its role in cranial autonomics and vasodilation. There remains an overall lack of well-established SPG treatment protocols, particularly with the advent of newer commercial devices.

**Methods** A 22 multiple choice question survey was created to evaluate clinical practice patterns with SPG block and sent to members of the American Headache Society (AHS). Questions focused on determining indications, preferred applicators, medications applied, perceived efficacy, tolerability, and reimbursement.

**Results** One hundred seventy-two of 1,346 (12.8%) AHS members participated. Ninety-three respondents (56.3%) had performed SPG blocks on 50 or fewer patients. The SphenoCath (42.4%) and the Tx360 (41.8%) were the most common methods of application. Ease of use was the top reason for provider preference in applicator type. SPG blocks were mostly used as an as-needed one-time procedure. When a scheduled protocol was used, twice weekly for 6 weeks was most common. Chronic migraine was the most commonly treated headache disorder and rated the most likely to respond to SPG block. Experienced clinicians found SPG more helpful as a stand-alone treatment and tended to report that acute relief was not predictive of enduring response.

**Conclusions** The variety of responses strongly suggests that clinicians would benefit from formalized protocols for SPG blocks. More experienced clinicians may have developed individualized protocols that they feel are more effective. The lack of evidence-based protocols contributes to clinicians not performing SPG blocks more frequently.

A Treatment of Migraine in Patients With CADASIL: A Systematic Review and Meta-analysis

**Background** Migraine is a common and often refractory feature for individuals with cerebral autosomal dominant arteriopathy with subcortical infarcts and leukoencephalopathy (CADASIL) without consensus guidelines for treatment. Migraine treatment poses a theoretical risk within this unique population with precarious cerebrovascular autoregulation, given the vasomodulatory influence of many antimigraine medications. In this systematic review and meta-analysis, we evaluate the frequency and efficacy of treatments for migraine in individuals with CADASIL.

**Methods** A search protocol was designed to include all available publications reporting antimigraine therapies for CADASIL. Individual responses to medications were categorized as unfavorable, neutral, or favorable. Responses across medication classes were compared using the Mann-Whitney U test.

**Results** Thirteen studies were included, yielding a cohort of 123 individuals with a median age of 53 years (range: 23–83 years), with 61% (75/123) being women. No controlled trials were identified. Simple analgesics (35.8%, 44/123) and beta-blockers (22.0%, 27/123) were the most common abortive and prophylactic strategies, respectively. Over half (54.4%) of all patients had used more than 1 medication sequentially or concomitantly. Beta-blockers were significantly associated with a neutral or unfavorable response (13.5%, 22/163, p = 0.004). We found no significant associations among other medication categories.

**Conclusions** Migraine in CADASIL remains a formidable therapeutic challenge, with patients often tried on several medications. Antimigraine prophylaxis with beta-blockers may be contraindicated relative to other common therapies in CADASIL. Controlled studies are needed to rigorously evaluate the safety and efficacy of antimigraine therapies in this population.