Efficacy of sphenopalatine ganglion blocks in a pediatric headache practice

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Background
The treatment of children and adolescents with migraine proposes unique challenges in that many or most FDA approved treatments for headaches are off-label in children. Also, many patients and their parents would like to refrain from daily preventative medications and/or oral abortive medications if possible. In addition, procedures involving injections pose a concern to many children. The sphenopalatine ganglion (SPG) block provides a safe, quick, fairly non-invasive mode of acutely and preventatively treating patients with migraine. We believe it can replace, or be an adjunct to other preventative migraine treatments for children.

Objective
To determine the efficacy, tolerability of SPG blocks, and reduction in disability in children with migraine

Methods
- Retrospective chart review over 2 years in a large tertiary hospital clinical headache practice
- Inclusion criteria: children up to age 18 years with episodic or chronic migraine, who have received at least 2 SPG blocks and completed Pediatric Migraine Disability (PedMIDAS) questionnaires at visits
- PedMIDAS grading scale: >50=severe disability, 31-50=moderate, 11-30=mild, 0-10 = little to no disability
- Safety and tolerability assessed via patient and/or caregiver report of adverse events at each visit

Demographics: 4 males, 35 females
Mean age = 14.46 years; Range = 8 years to 18 years
13 patients diagnosed with CM decreased to EM. 1 patient developed CM from EM

Results

Efficacy
Children showed a mean reduction of 28.74 in PedMIDAS scores with receiving 2 or more SPG blocks.
- Mean PedMIDAS score: 58.23 (high=180, low=1)
- Last mean PedMIDAS score: 29.23 (high=90, low=0)
- 8 patients stopped use of preventative med
- 10 patients were not on a preventative at start and finish
- 7 patients went on prevention or switched to another
- 14 patients stayed on their preventative

10 patients were not on a preventative at start and finish

- Initially = 0-10
- Stopped preventative, 8
- Began or started preventative, 7
- No preventative, 10

Limitations
- Small sample size
- Subjective reports weaken validity
- Concurrent treatments may obscure source of adverse effects and/or efficacy
- Patients (or their visits) excluded if PedMIDAS was not completed
- Cohort consists of some patients with medically intractable migraine
- Barriers to receiving treatment exist (insurance coverage, access, scheduling)
- External factors (stress, trauma, etc.) not evaluated
- Further studies necessary

References