T360® a Minimally-Invasive Technique for Sphenopalatine Ganglion Nerve Block in the treatment of head and face pain: a case series

Kenneth D. Candido, MD¹,², N. Nick Knezevic, MD, PhD¹,², Ruben I. Sauer¹, Lalida Chupatanakul, MD¹

¹Department of Anesthesiology, Advocate Illinois Masonic Medical Center, ²University of Illinois, Chicago, IL

Abstract

The sphenopalatine ganglion (SPG) is located on the posterior aspect of the middle nasal turbinate, and has been implicated as a strategic target in the treatment of various head and face pain conditions. The purpose of this pilot study was to evaluate the effect of the novel, revised method for SPG nerve block with the use of T360®. We are presenting three patients with various head and face pain conditions (post-herpetic neuralgia, chronic migraine, and trigeminal neuralgia). The average baseline NRS pain score was 7. All patients reported significant pain relief within the first 15 minutes post-injection. Significantly reduced NRS scores were observed for 2 of the 3 study participants.

Introduction/Methods

The literature is rich with different examples of SPG interventions for painful face and head conditions. SPG interventions range from minimally invasive to non-invasive and from cumbersome, technical, and expensive to fast, simple, and inexpensive. Regardless of the approach, the intent of the SPG intervention is to block or modulate its function thereby eliminating head pain. This effect can either be temporary or permanent depending on the technique. The transnasal approach is the simplest, safest, and least expensive of the SPG interventions. With this technique, a topical anesthetic blocking agent can be delivered to the area of mucosa associated with the SPG.

• The T360® (Figure 1) overcomes inaccuracy and patient discomfort associated with the long-standing cotton-tip application of transnasal technique.

• In addition, it can be used with deviated septum patients unlike its predecessor.

• After IRB approval three subjects were included, and followed for 28 days with NRS pain score, patient’s global impression of change (PGIC), and Modified Brief Pain Inventory Short form (MBPI-sf), satisfaction and use of pain medications.

Results

Patient #1

A 15-year-old female with two year history of bilateral supraorbital headaches due to postherpetic neuralgia, and post-decompression of Arnold Chiari malformation. These headaches are paroxysmal, sharp, shooting pain located on the right supraorbital region. The patient fell during the first two weeks after SPG block (Figures 2 and 3). During this period, the patient reported significant improvement to the area of mucosa associated with the SPG.

• SPGB with T360® provides rapid clinically significant pain relief with minimal complications at a very low cost.

• As the maximal levels of pain relief were observed to diminish a couple of weeks post-treatment, the efficacy of serial interventions should be investigated.

• Additional studies are needed to assess the efficacy of this technique across the entire spectrum of head and face pain conditions.

The ease of the T360® should allow for broad potential use beyond the pain specialists, even in the busiest primary care and ER departments.

Conclusions

References