

## 08. Sphenopalatine ganglion block using the Tx360 nasal applicator for the treatment of trigeminal neuralgia: A pilot study

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**Background:** Sphenopalatine ganglion (SPG) is located within the pterygopalatine fossa, being the only ganglion outside the cranial cavity. Trigeminal neuralgia (TGN) is currently considered as an indication for SPG block, especially in medication-resistant cases. The aim of this observational study is to assess the effectiveness of the SPG block for the treatment of trigeminal neuralgia, using a noninvasive transnasal approach, by delivering local anesthetic with the alternative device Tx360 nasal applicator.

**Methods:** This study concerns patients suffering drug-resistant TGN. In addition to their medication, these patients received SPG block, using the Tx360 nasal applicator in order to deliver 0.3 mL of xylocaine 2%, bilaterally, once a week, for 8 weeks. Eight patients presented with either classical or atypical, V<sub>2</sub> (maxillary branch) or V<sub>3</sub> (mandibular branch) TGN, partly or completely drug-resistant, having VAS = 8–9, under drug treatment, with no clinical improvement.

**Results:** All patients reported significant pain relief, VAS = 5–6 (3 patients since the first application) and decrease of daily pain episodes. Specifically, after completing therapy, 6 patients were completely symptom-free, 1 reported significant clinical improvement regarding pain intensity and number of pain episodes and 1 patient reported no improvement at any disease level. Favorable outcomes have lasted for up to 3 months for each case. No significant adverse events were noted to any patient.

**Conclusions:** Preliminary data extracted from this pilot study suggest that repetitive SPG block with the Tx360 nasal applicator may constitute an easy, rapid, safe and efficient treatment of trigeminal neuralgia. Further relative double-blind, randomized studies are required in order to draw solid conclusions.