Interventional management of facial pain: A retrospective case series

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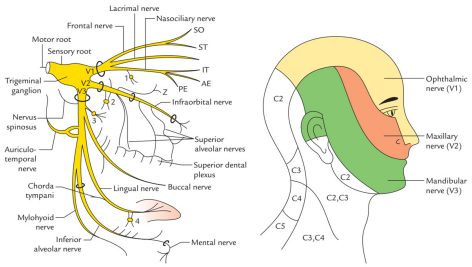
Background

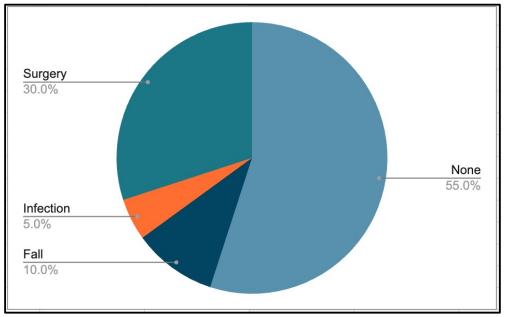
- Trigeminal neuralgia is most commonly due to vascular compression of the trigeminal nerve (tic douloureux) and is potentially amenable to surgical intervention[1]
- Atypical facial pain can result from other etiologies of trigeminal neuralgia including infection, injury, autoimmune, iatrogenic, and idiopathic, and may be more challenging to treat if patient does not respond to medical management[2]
- Pain can affect the main divisions of the trigeminal nerve or more distal branches



Methods

- Retrospective chart review of patients treated for facial pain at University of Massachusetts Pain Center from 7/2020 – 9/2023
- Patients with facial pain who had inadequate pain relief with medical management using a combination of anti-inflammatory, anticonvulsant, tricyclic antidepressant, muscle relaxant, and opioid medications were identified
- Patients reported a variety of inciting events (see Fig 1)
- 20 patients were identified (14 female, 6 male) ranging in age from 24 – 85 years old. 16 patients reported unilateral facial pain and 4 reported bilateral facial pain.
- Patients underwent infraorbital, supraorbital, supratrochlear, zygomaticotemporal, or trigeminal nerve blocks depending on the laterality and distribution of reported pain

Figure 1. Self-reported inciting events



Results

- Following injection, 4 patients reported complete relief, 3 patients reported no relief, and the remaining reported intermediate relief with a median of 80% improvement in pain (see Fig 2)
- Length of benefit ranged from 1-5 months with a median of 3 months (see Fig 3)
- One patient with less than 4 weeks of relief additionally underwent radiofrequency ablation procedures but without substantial improvement in length of benefit

Figure 2. Pain relief from injection (in percentage relief)

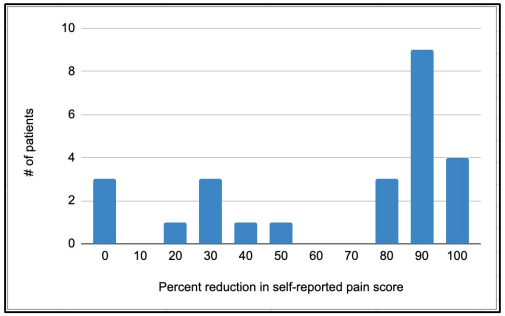
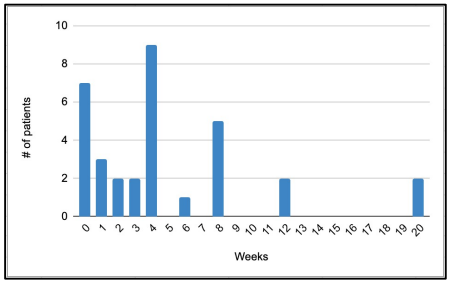


Figure 3. Duration of benefit after injection (in weeks)



Conclusions

- Interventional pain management techniques such as ultrasound-guided nerve blocks are an option that may provide significant and durable pain relief to patients with trigeminal neuralgia or chronic facial pain that is not adequately managed with medication or amenable to surgery

Future Work

- Techniques that may provide longer relief when a patient is responsive to nerve blocks:
  - Radiofrequency ablation
  - Cryoablation
  - Peripheral nerve stimulation
  - Cervical spinal cord stimulation[3]
- Large-scale, randomized controlled studies assessing the efficacy of these interventional techniques compared to placebo

References

1. Abd-Elsayed A. Trigeminal Nerve Pain: A Guide to Clinical Management. 1st ed. Springer International Publishing; 2021.

2. Gupta M, Chitneni A, Ghorayeb J, Schnetzer B, Klusek M. Cervical Spinal Cord Stimulation for Trigeminal Neuralgia: a Narrative Review. Curr Pain Headache Rep. 2022 Aug;26(8):639-645.

3. Weiss AL, Ehrhardt KP, Tolba R. Atypical Facial Pain: a Comprehensive, Evidence-Based Review. Curr Pain Headache Rep. 2017 Feb;21(2):8.