

Refractory Postoperative Trigeminal Neuralgia Pain Treated With An Inpatient Trigeminal Nerve Block

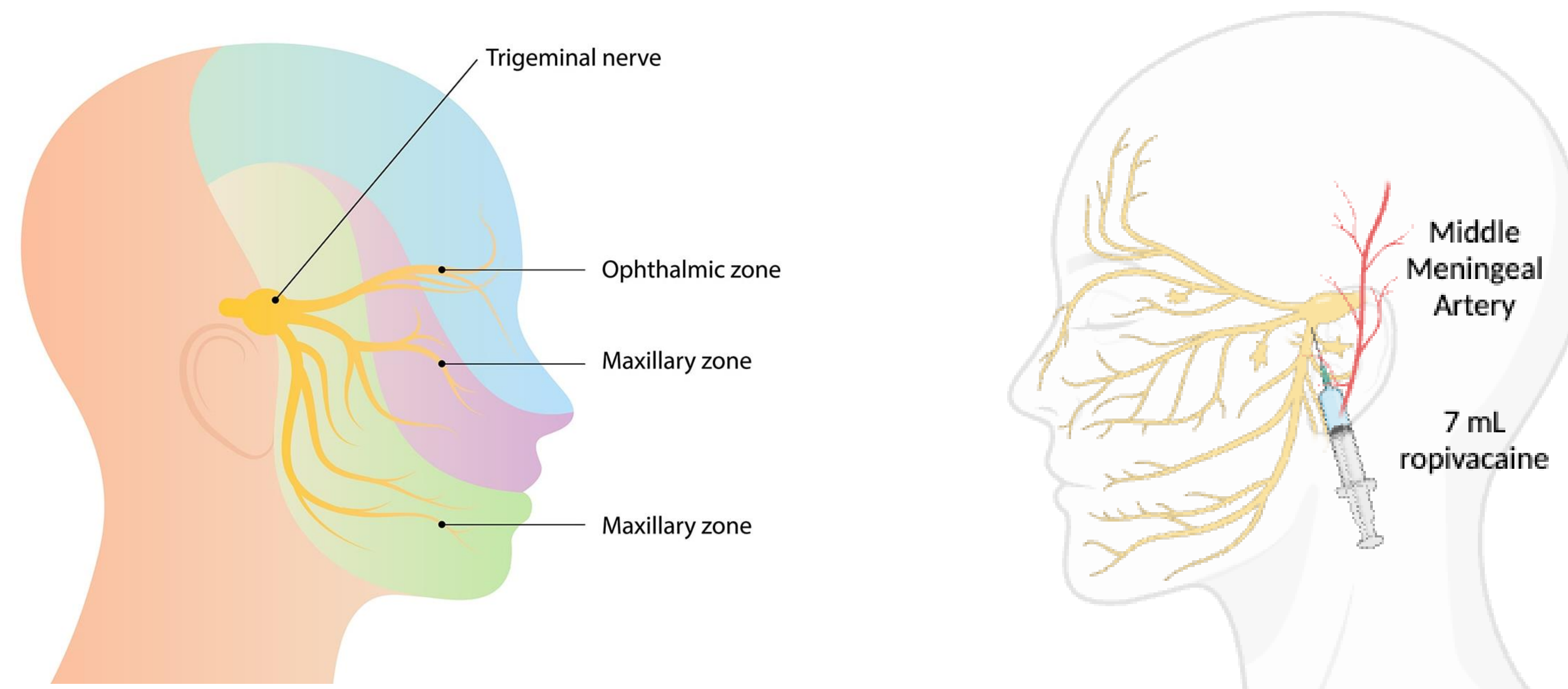
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BACKGROUND

- Trigeminal neuralgia (TN) pain is typically characterized by an abrupt, unilateral shock-like or sharp pain
- **Pathophysiology:** Compression of the trigeminal nerve by a blood vessel
- **First line treatment:** Na channel blockers, lamotrigine, baclofen, pregabalin, or gabapentin
- **Surgical intervention:** Microvascular decompression
- **Acute abortive treatment:** IV antiepileptics, peripheral nerve interventions including botulinum toxin injections and local anesthetic trigeminal nerve blocks
- We present the case of an acute flair of TN pain s/p microvascular decompression and escalating medication management managed with the use of a trigeminal nerve block

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CASE DESCRIPTION

- 21yo F fibromyalgia, Ehlers-Danlos syndrome, trigeminal neuralgia, and minor glossopharyngeal neuralgia (L>R) presented to the inpatient pain service with acute right sided facial pain following left rectosigmoid craniectomy for microvascular decompression of cranial nerve 5,7,9, and 10
- **Current medication regimen:** acetaminophen 975 mg q8h, gabapentin 600 mg qid, tizanidine 4mg bid, and baclofen 10 mg q6h
- **Breakthrough medications:** IV pushes of levetiracetam, fosphenytoin, fentanyl, and hydromorphone
- **Procedure:**
 - Right pterygopalatine fossa located using ultrasound
 - 2 mL of lidocaine 1% to anesthetize the skin and subcutaneous tissue
 - 22 gauge Pajunk needle was advanced into the pterygopalatine fossa lateral to the maxillary artery
 - 7 mL of 0.25% ropivacaine administered
 - 100% pain relief on the right side for 2-3 days
 - Repeat procedure on the left 2 days after, no acute pain relief

DISCUSSION

- Bilateral trigeminal nerve blocks are typically administered in the outpatient setting
- Inpatient administration when IV opioids and antiepileptics are failing
- Microvascular decompression, Gamma knife surgery, glycerol rhizotomy, radiofrequency ablation, or balloon compression associated with longer term improvement
- Some literature reports nearly 80% relief of pain for at least 2 weeks after local blocks with less medication use
- Trigeminal nerve blocks are less invasive, and should be further explored and emphasized as the next line or interim treatment
- Stellate ganglion block can also provide pain relief, yet more research is needed
- Reduce the use of higher-risk medications such as antiepileptics and opioids, and improve patients' pain even if only temporary

