

Case study

A complicated case of Post herpetic neuralgia of the face

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An 88 year old man presented to us referred by his primary care physician for right sided facial pain related to post herpetic neuralgia (PHN). He had shingles two months prior to presenting to us that involved the right ear, right temporal area and extended into the right jaw, but did not involve his eye. Shortly after resolution of his facial rash, he started experiencing 9/10, burning pain in a similar distribution. The patient's pain hindered his sleep, he had difficulty eating solid food, and shaving. Patient has been prescribed amitriptyline, Gabapentin, antivirals and Lyrica. He has had minimal relief with all these medications. An MRI of the brain was non contributory. Of note, the patient was recently started on Eliquis by his cardiologist for coronary artery disease (CAD) status post percutaneous coronary intervention (PCI) and a recent AICD placement.

During his first visit to our clinic, the patient underwent a right auriculotemporal and mental nerve block that have provided 90% pain relief with the improved ability to move his jaw without pain. The decision was then to schedule the patient for a cryoablation of the same nerves and prescribe bupivacaine eardrops for the ear canal pain. He presented back to us a month following the cyroablation procedure and reported good pain relief of the mental area, but unfortunately had persistent pain in the right temporal area and his right ear canal which were only relieved for a short period of time with the bupivacaine drops. The patient was then scheduled for a right mandibular nerve (V3) pulse radiofrequency (PRF). He experienced complete pain relief for one month, but the pain in his temporal area has resurfaced. His ear pain is much more manageable and the mental pain is still absent. We then proceeded to perform a right auriculotemporal and zygomatic nerve block with bupivacaine in clinic. We had scheduled the patient for a repeat block with local anesthetic, but on his follow up 3 days later, he did not report significant pain. He is currently on a "return to clinic as needed" status.

Postherpetic neuralgia (PHN) is a persistent neuropathic pain that remains after a herpes zoster rash has healed. The range of herpes zoster incidence varies according to different investigators and lies from 0.1 to 4.8 per million per year. The pain usually accompanies the vesicular eruption but typically lasts only for this period. However, approximately 10 to 20% of patients with the herpes zoster will suffer from postherpetic pain. The incidence of the postherpetic pain increases with age: 50% of the cases occur in patients older than 60 years of age and 75% in those older than 70 years¹. Primary trigeminal neuralgia (TN) is one of the best-explored type of pain and generally responds well to treatment. However, the treatment of other types of the facial pain, such as the TN

accompanying multiple sclerosis or trigeminal post-herpetic neuralgia (TPHN) is more difficult. TPHN is particularly difficult and often frustrating to treat.

Neurodestructive has been attempted with success in the past but is not a preferred method of treatment given the high incidence neurological damage of the trigeminal nerve and even aggravation of neuropathic pain³. PRF is a minimally invasive treatment of neuropathic pain⁴. As opposed to conventional continuous radiofrequency (CRF) therapy, the temperature of the radiofrequency needle used in PRF does not exceed 42°C, so there is no nerve injury, only modulation of the nerve activity. PRF of peripheral nerves (supraorbital, infraorbital, and mental nerves) is commonly used⁵. PRF treatment of the trigeminal gasserian ganglion, however, is able to target the core of the disease. The affected divisions of the trigeminal gasserian ganglion can be identified by RF current stimulation, allowing for treatment closer to the site of the disease and making the treatment more accurate.

Our case study included a 88 year gentleman with apparent TPHN. He had intractable pain that was unresponsive to medications (antivirals, gabapentin, cymbalta). His pain significantly impacted his quality of life, as he was unable to shave, eat appropriately or even get adequate sleep. His treatment consisted of several nerve blocks with local anesthetics, nerve cryoablation and a V3 pulsed RF. We originally tried to treat the patient's pain with conservative management as well as less invasive interventions, given his anti-coagulation therapy and elevated risks of holding his medications. But due to the persistence of the pain and the reported negative impact on the patient's life, we have communicated with his cardiologist and made a decision to stop the Eliquis in order to perform a pulse RF of V3 with reducing the risk of bleeding. His pain was significantly reduced one month following the pulsed RF, which is in alignment with previous documentation of pulse RF for TPHN.

TPHN is one of the most painful condition reported that can be debilitating and even lead to suicide in its affected population. The treatment of this severe pain condition remains difficult up to today and many modalities have shown different level of success (anti-convulsives, opioids, CBD, capsaicin, gamma-knife, radiofrequency ablation, pulsed RF). We presented a case with satisfactory level of relief using pulsed RF.

References:

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