Supraorbital Nerve Stimulation

- Elucidation of blink reflex characteristics in Parkinson's disease subtypes through prepulse inhibition
- The Relationship of Depth of Anaesthesia With Blink Reflex in Cats
- Contralateral R1 response in blink reflex in patients with amyotrophic lateral sclerosis
- Comparison of Two Different Neuromodulation Treatments in Patients With Acute Zoster-Related Trigeminal Neuropathic Pain and Pain Catastrophizing
- Update on Neuromodulation for Migraine and Other Primary Headache Disorders: Recent Advances and New Indications
- Short-Latency Trigeminocervical Reflex Obtained Without Muscle Activation: Topographic Distribution and Methodological Approach
- Neurotrophic Keratitis
- The sensory input, not the motor output, defines blink reflex conditioning

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see Supraorbital neuralgia

Elkholy et al. describe the possibility of proposing peripheral nerve stimulation of the supraorbital nerves to treat patients with medically intractable facial pain. Stimulation of the supraorbital nerves is performed using percutaneously inserted electrodes that are positioned in the epi-fascial plane, traversing the course of the supraorbital nerves. The procedure has two phases starting with a trial by temporary electrodes that are inserted under fluoroscopic guidance and are anchored to the skin. This trial usually lasts for a few days to 2 weeks. If successful, we proceed to the insertion of a permanent electrode that is tunneled under the skin behind the ear toward the infraclavicular region in which we make a pocket for the implantable pulse generator.

This procedure has been used in multiple patients with promising results which were published in the literature. Literature shows that it provides relief of medically intractable pain, without the need for destructive procedures or more central modulation approaches with a preferable safety profile compared to other invasive procedures. Supraorbital nerve stimulation is now considered a valid modality of treatment for patients with medically intractable facial pain and can be offered as a reliable alternative for the patients while discussing the proper plan of management [1)].

Case reports

a 57-year-old male patient with left orbital trauma who developed PTNP immediately after the injury and secondary hemifacial dystonia 7 months thereafter. To treat his neuropathic pain, we performed peripheral nerve stimulation (PNS) using a percutaneously implanted electrode to the ipsilateral supraorbital notch along the brow arch, which instantly resolved the patient's pain and dystonia. PTNP was relieved in a satisfactory manner until 18 months after the surgery, despite a gradual recurrence of the dystonia 6 months after the surgery. To the best of our knowledge, this is the first reported case of PNS used for the treatment of PTNP combined with dystonia. This case report highlights the potential benefits of PNS in relieving neuropathic pain and dystonia and discusses the underlying

therapeutic mechanism. Moreover, this study suggests that secondary dystonia occurs due to the uncoordinated integration of afferent sensory and efferent motor information. The findings of the present study indicate that PNS should be considered for patients with PTNP following the failure of conservative treatment. Secondary hemifacial dystonia may benefit from PNS upon further research and long-term assessment [2].

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Elkholy MAE, Abd-Elsayed A, Raslan AM. Supraorbital Nerve Stimulation for Facial Pain. Curr Pain Headache Rep. 2023 May 2. doi: 10.1007/s11916-023-01113-6. Epub ahead of print. PMID: 37129764.
2)
Li J, Li Y, Shu W. Case report: Peripheral nerve stimulation relieves post-traumatic trigeminal neuropathic pain and secondary hemifacial dystonia. Front Neurol. 2023 Feb 14;14:1107571. doi: 10.3389/fneur.2023.1107571. PMID: 36864912; PMCID: PMC9974163.