

SELECTIVE V₂ / V₃ RADIOFREQUENCY THERMOCOAGULATION, MANDIBULAR NOTCH APPROACH FOR TRIGEMINAL NEURALGIA. OUTCOMES.

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Trigeminal Neuralgia is a very incapacitating illness of neuropathic pain that affects head and neck mostly unilateral of second or third division of the V cranial nerve. It requires long term neuromodulators treatment for controlling paroxysmal attacks of lancinating pain and triggering allodynia but in refractory cases, interventional procedures like: balloon decompressions, glycerol injections, peripheral or central blocks, Thermocoagulation by Radiofrequency (TCRF), Stereotactic Radiosurgery, Neurostimulation or Microvascular decompression neurosurgery are needed.

OBJECTIVE. The aim of this clinical study is to report outcomes in pain relief, neuropathic features as allodynia and paroxysmal attacks, neuromodulators dose and complications of an ambulatory procedure as Radiofrequency Thermocoagulation of selective trigeminal divisions V₂ / V₃ through mandibular notch.

METHODS. In the study 12 patients diagnosed of Trigeminal Neuralgia of II and/or III division, underwent Radiofrequency Thermocoagulation of selective trigeminal divisions through mandibular notch, in operating room guided by C arm. with basic monitoring. local anesthetic

and light sedation with Midazolam and Fentanyl. After introducing a 5mm tip RF needle, testing with motor and sensory stimuli was carried out for verifying needle target position, Thermocoagulation by Radiofrequency was performed in this sequence: two PRF (pulsed radiofrequency) 42°C for 120 seconds each, and after injecting 1ml bupivacaine 0.25% with 2mg dexametasone, two CRF (continues radiofrequency) 80 C for 75 seconds each (Baylis Radiofrequency generator). Pain relief with VAS, was recorded in followed up assessments during a year, presence of triggering allodynia and paroxysmal attacks, diminish of neuromodulators doses and complications.

RESULTS: Significant pain relief in VAS noted without allodynia or paroxysmal attacks at the end of the procedure and increasing improvement 1, 3, 6, 9, months later assessments, with sustained pain relief at 12 months appointment in 10 patients (84%). These patients diminished neuromodulators doses by 50-100% progressively in a year. One patients (8%) had a mild relapse 3 months after procedure that was controlled rising

neuromodulators dose and after remained controlled with half of the dose. One patient (8%) relapsed severely two months after the procedure, requiring peripheral nerve blocks and increasing dose of neuromodulators. She continued struggling with pain for 12 months after TCRF and obtained sustained pain relief with Microvascular decompression Surgery. Minor complications listed: bruises, local swelling, mild and transient hypoesthesia of the cheek.

CONCLUSIONS: Radiofrequency Thermocoagulation of selective trigeminal divisions V₂ / V₃ with mandibular notch approach is an effective alternative for Trigeminal Neuralgia sustained pain relief with low incidence of minor complications.

