A Retrospective Observational Study on the duration of analgesia following Pulsed Radio Frequency treatment for the management of Trigeminal Neuralgia

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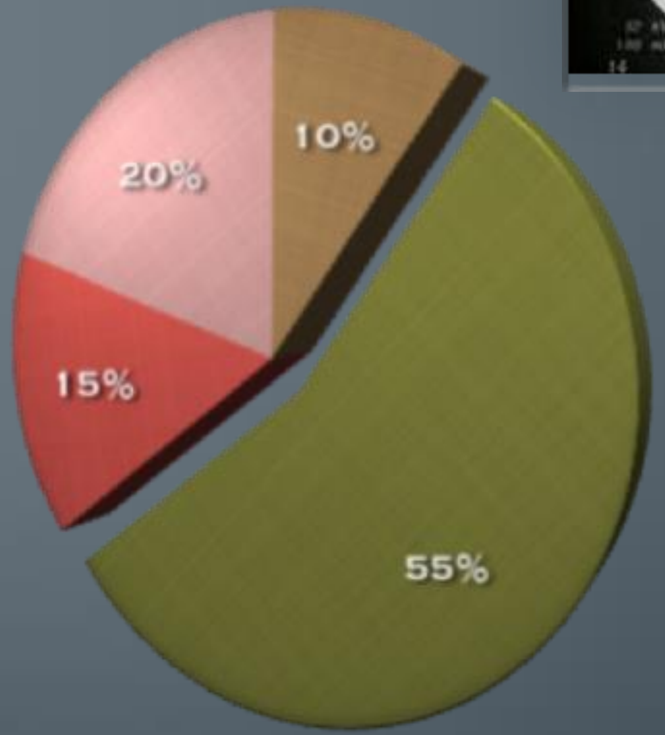
Background

The optimal interventional management of trigeminal neuralgia after medical failure remains unclear. Options include: craniotomy, gammaknife, neural blockade, rhizotomy (RF) and pulsed RF (PRF). Neural blockade may offer short lived benefit only whilst craniotomy, gammaknife and RF are associated with significant complications. PRF treatment may be an alternative; as yet poorly defined.

Aims and Procedure

To asses the duration of analgesia and complications at 3 months and one year after the treatment.

Foramen ovale visualized under fluoroscopic guidance in submental view. 22G 10cm RF needle with 5mm active tip used. After eliciting motor stimulation in the mandibular nerve territory RF needle was advanced until only sensory stimulation over painful division was perceived at <0.4 mV. Dexamethasone 4mg and 1ml Lignocaine2% given prior to 2 cycles of 90s PRF, 20ms x 2Hz x 45V



Patient and Methods

After ethical approval a review of the longevity of analgesia following PRF for trigeminal neuralgia was performed. Endpoints were date of treatment and follow up at 3 month and one year after. All patients had a strong history of trigeminal neuralgia with an MRI performed to exclude vascular malformation and multiple sclerosis.

Results

32 patients underwent PRF treatment from January 2012 to December 2014. 12 patients did not reattend; so no judgement made. All patients had analgesia immediately afterwards confirming correct placement. At 3 month follow up 3/20 patients had no response to the PRF and 1 was subsequently diagnosed with the MS later. 17/20 patients had excellent analgesia with oral analgesic reduction. At one year follow-up 11/20 patients reported excellent analgesia and 6 patients had analgesia lasting less than 6 months. 2 patients were offered repulsing and 4 send for neurosurgical referrals. There were no complications to the treatment.