Aggressive use of opioids in trigeminal neuralgia patients

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Introduction

- The first-line treatment for trigeminal neuralgia (TN) is pharmacological management with carbamezapine (CMZ) or oxcarbazepine (OXC).

- Neurosurgical intervention can be offered to those with medically-refractory TN.

- Despite lack of evidence and potential for abuse, opioids use is prevalent in patients with TN and other forms of neuropathic pain.
Methods

- Retrospective study of patients with TN seen by a single neurosurgeon.
- 309 patients: males 36%, mean age 61 ± 14 years old
  - 70% TN Burchiel’s type 1 (TN1)
  - 18% Burchiel’s type 2 (TN2)
  - 6% atypical facial pain (AFP)
  - 6% TN secondary to multiple sclerosis (TN-MS)
Results - baseline opioid use

- At the time of initial presentation, 20% were on opioids.
- Of the 62 patients on opioids, 45% were on combination therapy with CBZ/OXC, 84% were on concurrent therapy with at least one type of anti-epileptic drug.
- On subgroup analysis, 13% of TN1 patients were on opioids, in contrast to 36% of TN2 patients (Fisher's, $p<10^{-3}$), 56% of AFP patients ($p<10^{-4}$).
- On multivariate logistic regression, diagnosis (TN1 vs other diagnoses; $p=0.01$) and facial pain at its worst ($p=0.005$) were statistically-significant predictors of opioid use at baseline.
Results - response to intervention

- Following neurosurgical intervention (N=94 MVD, 123 GK, 7 glycerol rhizotomy), opioid use decreased to 11% at one-month follow-up and to 8% at long-term follow-up (1-6 years).
- On multivariate logistic regression, diagnosis (TN1 vs other diagnoses; $p=0.01$) and post-intervention reduction in facial pain at its worst ($p<10^{-3}$) were statistically-significant predictors of opioid use at long-term follow-up.
Conclusion

- Use of opioids, mostly as an adjunct to AEDs, is prevalent in TN patients.
- Opportunities to curb opioid use in TN1 include earlier neurosurgical intervention.
- Opioid use was higher in TN2, and there was no durable reduction in opioid use with neurosurgical intervention, highlighting challenges in the management of TN2.