

Percutaneous Stimulation of the Mandibular Nerve for Atypical Facial Pain



Tawanna Charlton MD,
Yawar J. Qadri MD PhD

INTRODUCTION:

- 32-year-old with atypical facial pain focused in the right mandibular nerve.
- History significant for trigeminal neuralgia with multiple failed therapies.
- After discussion of risks, it was agreed upon to place of an off label percutaneous nerve stimulator to the mandibular nerve.

METHODS:



Patient's medical record was reviewed



Medical literature was reviewed, specifically the Kantorowicz technique



Placement of a PNS via submandibular approach under general anesthesia.



Relief from stimulator was assessed over a 60-day period.

RESULTS:

The patient reported 50% pain relief but struggled with the adhesive and dressing placement.

Lead migration occurred after 4 weeks. The PNS array was replaced using a similar approach, but tunneled.

Stimulation maintained 50% relief of her pain for the 60-day placement with minimal durable relief.

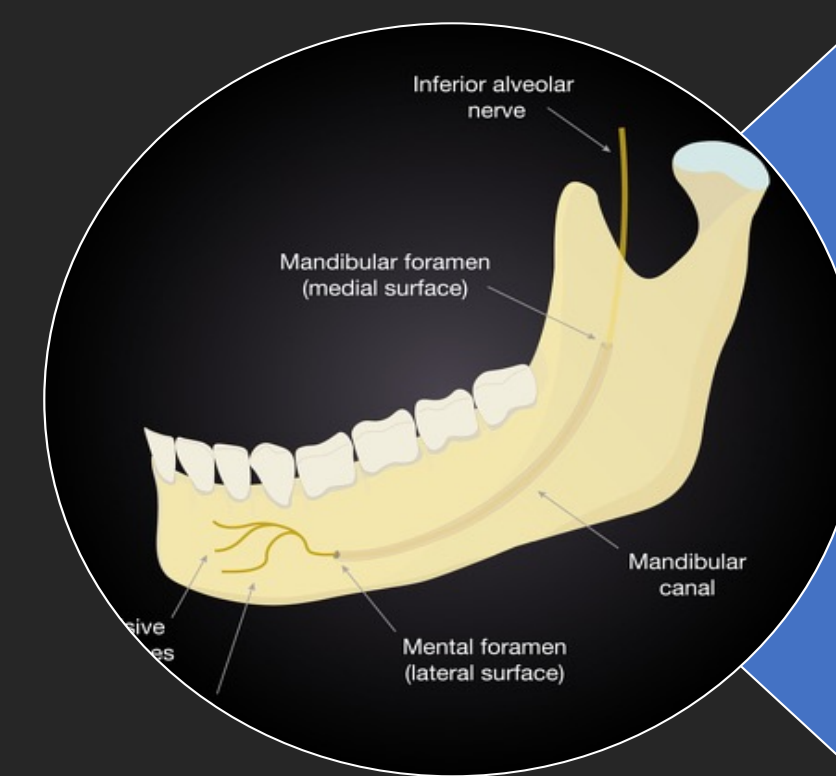
22nd Annual Pain Medicine Meeting

November 10-11, 2023 | #ASRA FALL23

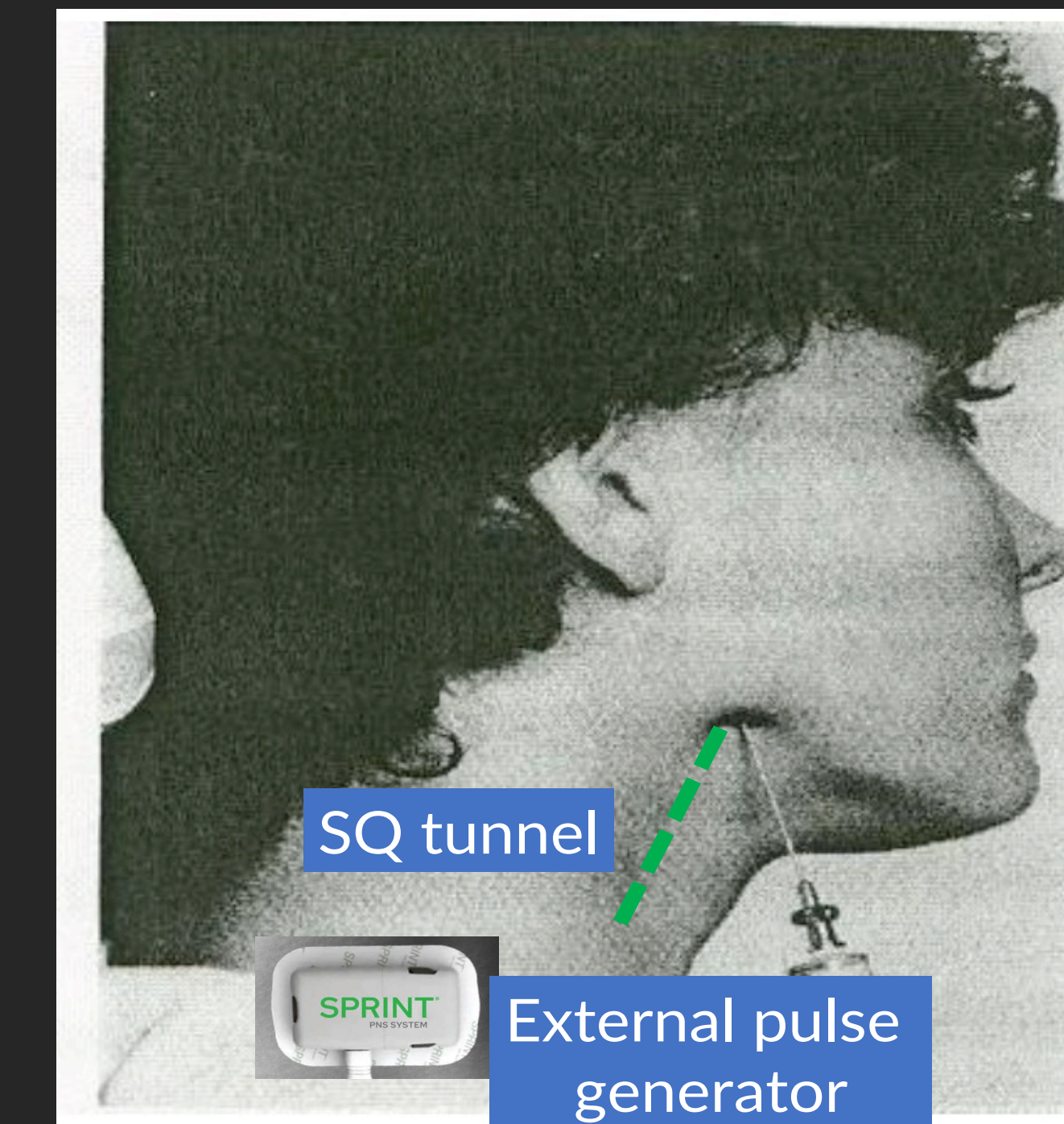
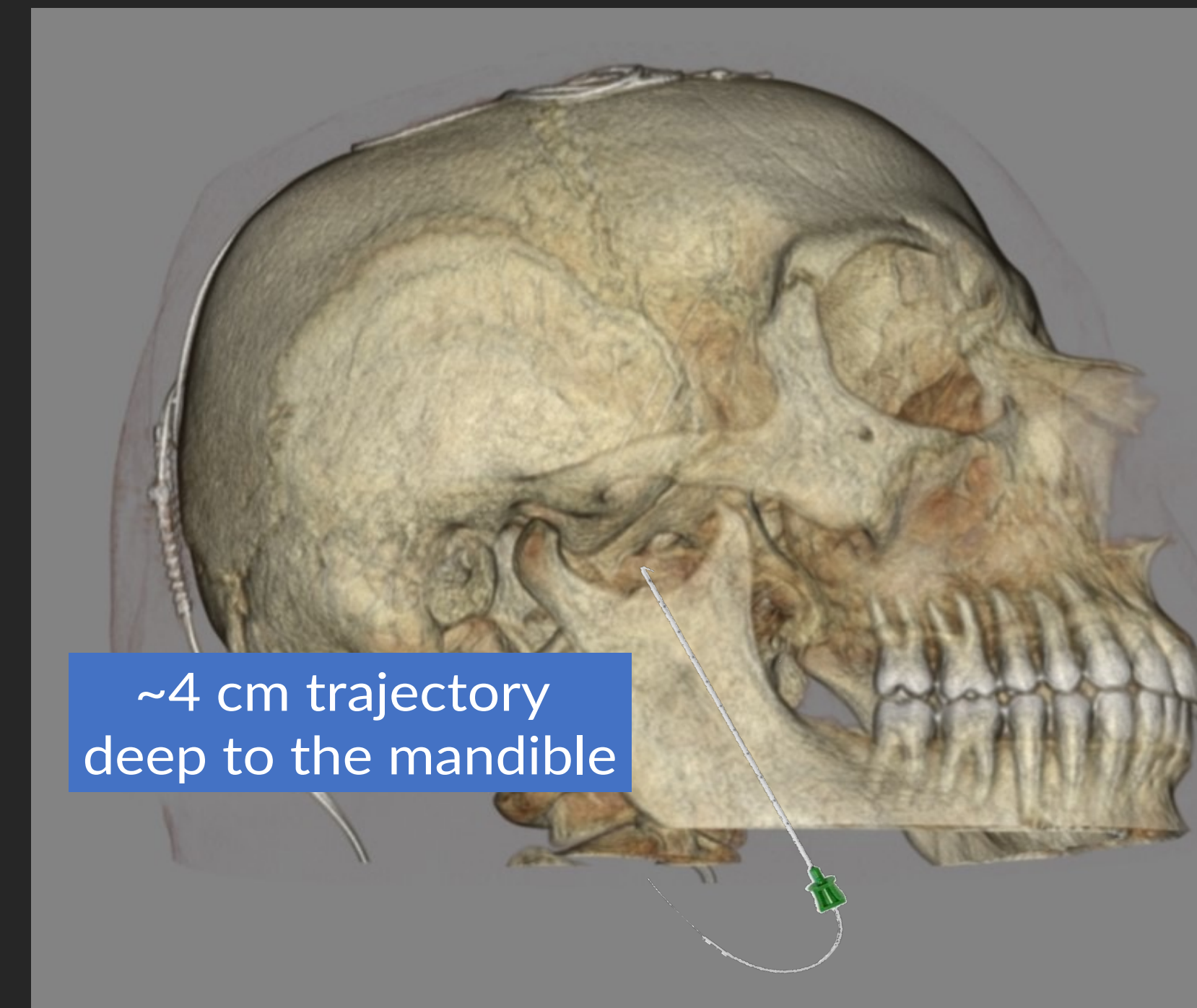
ASRA
PAIN MEDICINE



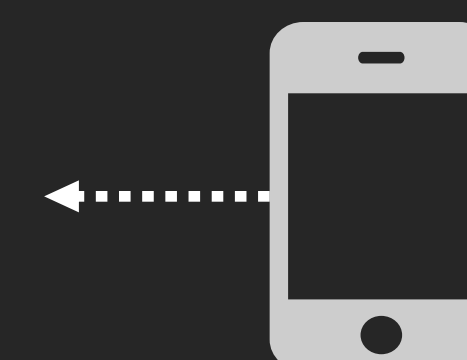
Dentists employ extra-oral approaches to block the trigeminal nerve branches.



The Kantorowicz technique to block the mandibular nerve can be modified to deploy a percutaneous nerve stimulator targeting V2 in a durable manner.



Off-label trigeminal nerve stimulation using the Kantorowicz technique should be further explored as an approach to treat atypical facial pain.



Take a picture to
download the full paper



EMORY
UNIVERSITY
SCHOOL OF
MEDICINE

Introduction: A 32-year-old female presented to the pain center for refractory atypical facial pain distributed in the right mandibular nerve region. She had a history of trigeminal neuralgia with multiple therapies including microvascular decompression x3; gamma knife treatments; balloon compression; trigeminal tractotomy; and deep brain stimulation targeting the VC, PBG, and subgenual cingulate. She presented specifically for the neuropathic pain in the mandibular nerve distribution. After discussion of risks, we agreed to the placement of an off label percutaneous nerve stimulator to the mandibular nerve.

Materials and Methods: The literature and medical record were reviewed. As the case report is devoid of patient identifiable information and consists of less than five patients, it is exempt from IRB review requirements as per Emory policy.

Results: Using a modified Kantorowicz technique, a percutaneous nerve stimulator was placed from a submandibular approach under general anesthesia. The patient reported 50% relief of her pain but struggled with the adhesive and dressing placement. Unfortunately lead migration occurred after 4 weeks and the PNS array was replaced using a similar approach, but tunneled to allow a dressing further down her neck. The patient was able to tolerate therapy, and stimulation maintained 50% relief of her pain for the 60-day placement with minimal durable relief.

Discussion: Trigeminal nerve stimulation remains off-label and there are limited reports of the usage of percutaneous nerve stimulators. This case reports describes the usage of the Kantorowicz technique to position an electrode array in a manner to capture the mandibular nerve as well as a simple tunneling technique to better anchor the lead with the increased mobility of the face/neck region.