Opioid Initiative Wave II – Occipital Nerve Blocks & Low Paraspinous Injections
Presenter

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Occipital nerve blocks and low paraspinous cervical injections

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US Epidemiology

- 2-3% of all ED visits
- 9% males, 20% females
- Higher incidence in:
  - Lower socioeconomic status
  - Elderly
  - Disabled

https://www.cdc.gov/mmwr/volumes/66/wr/mm6624a8.htm
Dermatomes of head and face

- Trigeminal nerve
- C2, C3
- Ophthalmic nerve (V1), branch of trigeminal nerve
- Maxillary nerve (V2), branch of trigeminal nerve
- Mandibular nerve (V3), branch of trigeminal nerve
- Auricular branch of vagus to external meatus and small area on posteromedial surface of auricle
- Dorsal rami of cervical spinal nerves
- Branches from cervical plexus
Pain pathways

- Trigeminal nerve
- Occipital nerve
- Facial nerve
- Vagus nerve
- Dorsal roots lower cervical spine

Greater occipital n.
Spinal nucleus & tract of V
Gasserian ganglion
Sensory roots C2 C3

TRIGEMINOCERVICAL COMPLEX

Higher cortical levels
Occipital Nerve blocks Indications

- Primary headache disorders
  - Migraine
  - Cluster
  - Chronic daily headache

- Secondary headache disorders
  - Cervicogenic
  - Post traumatic headache
  - Post Dural puncture headache

- Cranial neuralgias
  - Occipital neuralgia
Risks and caution with:

- Allergy to local anesthetic
- Skin infection
- Injury to occipital artery
- Injury to occipital nerve
- Previous craniotomy or known skull defect
- Anticoagulant or antiplatelet use
- Pregnancy
- Prior vasovagal syncope
Occipital protuberance

Greater occipital nerve injection site

Lesser occipital nerve injection site

Mastoid process
Materials:

- 0.25% or 0.5% bupivacaine or 1-2% lidocaine
- Alcohol pad, gloves
- 5ml syringe
- 25 or 27 gauge 1.5" needle
- Consent
Aspirate prior to injection!

Localize point of maximum tenderness

Insert needle pointing upward

Inject 1.5 – 3 ml of medication PER nerve
LESSER OCCIPITAL NERVE

Technique similar to GON injection
Low paraspinous cervical injections
Regional Head and Face Pain Relief Following Lower Cervical Intramuscular Anesthetic Injection

Gary A. Mellick DO, Larry B. Mellick MD


Treatment of Headaches in the ED With Lower Cervical Intramuscular Bupivicaine Injections: A 1-Year Retrospective Review of 417 Patients

CME

Larry B. Mellick MD, S. Timothy McIlrath MD, Gary A. Mellick DO


For CME, visit http://www.headachejournal.org
From The Department of Emergency Medicine, Medical College of Georgia, Augusta, GA (Drs. M ... More 

Address all correspondence to Dr. Larry B. Mellick, Department of Emergency Medicine, Medical College of Georgia, Augusta, GA.
**Indications:**

- Migraine headaches
- Trigeminal neuralgia
- Orofacial pain
- Corneal abrasions
- Post LP headache
- Meningitis

*NOT DIAGNOSTIC!*
Equipment

- 3ml 0.5% bupivacaine
- 23 or 25 gauge 1.5” needle
- nice to have: vapocoolant spray
Videos by Drs Mellick and Sacchetti
https://journals.lww.com/em-news/Pages/videogallery.aspx?videoid=4&autoPlay=true
Thank you!

• Questions?

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