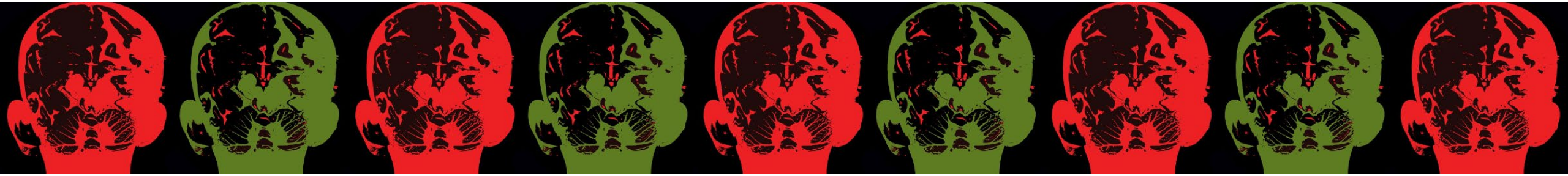


Elevator To The Gallows: Trigeminal Autonomic Cephalalgias (TACs)

Paul G. Mathew, MD, DNBPAS, FAAN, FAHS

BRAINWEEK™

Title & Affiliation

Paul G. Mathew, MD, DNBPAS, FAAN, FAHS
Assistant Professor of Neurology
Harvard Medical School
Headache/Sports Neurology/Concussion Specialist
Mass General Brigham Health Care
Harvard Vanguard Medical Associates

Disclosure

- Consulting Fee (e.g., Advisory Board): Allergan, Amgen, Biohaven, Impel, Lilly, Revance, Satsuma, Stealth BioTherapeutics, Supernus, Takeda, Theranica

Learning Objectives

- Accurately classify trigeminal autonomic cephalgias based on International Headache Society Criteria
- Choose appropriate studies for further evaluation based on patient history and physical findings.
- Outline an effective treatment plan including both pharmacological and non-pharmacologic interventions

Headache = Alarm System For Head

- Headache → Alarm
- Light Sensitivity → Radio
- Sound Sensitivity → Air conditioning
- Nausea/Vomiting → Car going in reverse

Headache Types

- Primary Headaches
  - Migraine
  - Cluster
  - Tension
- Secondary Headaches
  - Intracranial Tumors
  - Intracranial Hemorrhages
  - Meningitis
  - Pseudotumor Cerebri
  - Temporal Arteritis…

TRIGEMINAL AUTONOMIC CEPHALGIAS (TACs)

- Unilateral head pain associated with ipsilateral autonomic features
  - Usually a dominant side, but attacks can less often occur on the contralateral side
  - By definition, a single attack does not present with simultaneous bilateral pain
- Simultaneous bilateral pain with autonomic features is more suggestive of migraine with autonomic features rather than a TAC
  - A study of 786 migraine patients (625 women, 61 men), 56 percent of the subjects experienced autonomic symptoms, but these symptoms tended to be bilateral

1. Mathew PG. Headache Medicine: A Crossroads of Otolaryngology, Ophthalmology, and Neurology (Ophthalmology Installment). Practical Neurology. November/December 2014: 45-47.
2. Lai TH, Fuh JL, Wang SJ. Cranial autonomic symptoms in migraine: characteristics and comparison with cluster headache. J Neurol Neurosurg Psychiatry. 2009;80(10):1116-1119.

TRIGEMINAL AUTONOMIC CEPHALGIAS (TACs)

- Divided based on duration of attacks
  - SUNCT/SUNA 5-240 seconds
  - Paroxysmal Hemicrania 2–30 minutes
  - Cluster Headache 15–180 minutes
  - Hemicrania Continua Constant

1. Mathew PG. Headache Medicine: A Crossroads of Otolaryngology, Ophthalmology, and Neurology (Ophthalmology Installment). Practical Neurology. November/December 2014: 45-47.

TRIGEMINAL AUTONOMICEPHALGIAS (TACs)

	Cluster headache	Paroxysmal hemicrania	Hemicrania continua	Short-lasting unilateral neuralgiform headache attacks (SUNCT/SUNA)
ICHD-3 beta Code	3.1	3.2	3.4	3.3 SUNCT 3.3.1 SUNA 3.3.2
Sex (F:M)	1:5–7	1:1	2:1	1:2
Pain Type	Stabbing, boring	Throbbing, stabbing, boring	Throbbing, ache, sharp, pressure	Sharp, shooting, burning
Severity	Severe	Moderate–severe	Moderate background with severe exacerbations	Severe
Duration and frequency	15–180 mins, 1–8/day	2–30 mins, 5–40/day	Continuous	1–600 s, 1–200/day
Autonomic features	Yes	Yes	Yes with exacerbations	Yes[a]
Indometacin effect	No	Complete resolution	Complete resolution	No
First choice abortive agent	Injectable or nasal sumatriptan Oxygen	Nil	Nil	Nil
First choice preventative agents	Verapamil Lithium Topiramate Methysergide[b]	Indometacin	Indometacin	Lamotrigine

1. Miller S, Matharu M. Trigeminal Autonomic Cephalalgias: Beyond the Conventional Treatments. August 2014Current Pain and Headache Reports 18(8):438

Cluster Diagnostic Criteria

- Severe or very severe unilateral orbital, supraorbital and/or temporal pain lasting 15-180 minutes if untreated
- Headache is accompanied by at least one of the following:
  - Ipsilateral conjunctival injection and/or lacrimation
  - Ipsilateral nasal congestion and/or rhinorrhoea
  - Ipsilateral eyelid edema
  - Ipsilateral forehead and facial sweating
  - Ipsilateral miosis and/or ptosis
  - A sense of restlessness or agitation
- Attacks have a frequency from one every other day to 8 per day

Cluster Sub-types

- Episodic
  - Cluster headache attacks occurring in periods lasting from 7 days to one year, separated by pain-free periods lasting at least 3 months.
- Chronic
  - Cluster headache attacks occurring for one year or longer without remission, or with remission periods lasting less than 3 months.
- Typical cycle lasts 2 weeks to 3 months
- Typical remission period lasts 6 -12 months
- Majority of patients have episodic form

Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition. Cephalalgia. 2018;38(1):1-211.

Cluster Features

- Headaches are unilateral with rare side-shift
- Pain focused retro/peri-orbital
  - Classic description of “Hot poker stabbing through the eye”
- Referred to as “Suicide Headache”
  - Ideation 55%
  - Attempts 2%
- Pacing/rocking activity during headache unlike migraine

1. Rozen TD, Fishman RS. Headache 2011; 52: 99-113

Cluster Diagnosis

- Who is making the diagnosis?
  - Primary Care Physician: 34%
  - Neurologist (Non-Headache Specialist: 52%
  - Headache Specialist: 22%
- • Time delay to diagnosis:
  - < 1 year- 25%
  - 5 years- 42%
  - > 10 years-22%
- • Correct initial diagnosis in only 21%

1. Rozen TD, Fishman RS. Headache 2011; 52: 99-113

Cluster Epidemiology

- Age at onset is usually 20–40 years
- Prevalence 1/1000
- Male to female ratio of 3:1
- Much less common than migraine
  - 1/5 women and 1/20 men
- May have a familial predisposition
  - 14 - fold risk of cluster among 1st degree relatives
  - 17% had 1st degree relative with cluster (fathers 6%; mothers 3%)
  - 52% had family history of migraine

1. Russell et al. J Med Genetics 1995;32:954-956
2. Rozen TD, Fishman RS. Headache 2011; 52: 99-113

Sinus/Allergy Headache

- The great mimicker
  - Pressure in the face
  - Thin liquid nasal discharge
  - Worse with weather changes
  - Seasonal association
  - Responds to steroids
    - Like headaches
  - Responds to antibiotics ???
- Mathew's Sinus Triad
  - Thick purulent discharge
  - Fever
  - Imaging evidence of sinus disease
- Migrainous/Cluster features?
- The vast majority have migraine in the absence of neurologic and ENT findings

Mathew PG. Headache Medicine: A Crossroads of Otolaryngology, Ophthalmology, and Neurology (Otolaryngology Installment). Practical Neurology. April 2014: 35-36.

Clusta-Migraines

- A New England Specialty
- This diagnosis does not exist
- It would be like driving a Prius Hummer
- Single case report

Cluster Headache Is A Circadian Pain

- Attacks have a circadian rhythmicity
  - Same time of year, same time of day as often as 8 times per day
- Norwegian Study Fifty-eight men (aged 49.2 ± 13.6) and 12 women (aged 49.7 ± 15.5)
  - 40% chronic insomnia
  - 49% were shift workers
  - Insomnia was significantly associated with shift work and experiencing longer-lasting cluster bouts.
  - 37% had a seasonal association
  - 80% often or always had headache attacks during sleep,
    - The most frequent time interval being at 12:00-4:00 am.
  - Shift workers were significantly more likely to see lack of sleep as a cluster attack trigger than daytime workers.

Ofte HK, Berg DH, Bekkelund SI, Alstadhaug KB. Insomnia and periodicity of headache in an arctic cluster headache population.Headache. 2013 Nov-Dec;53(10):1602-12.

Cluster Headache Is A Circadian Pain

- Survey of 1134 cluster headache patients[1]
  - Cycles the same time every year (usually in the spring or fall)
  - 82% stated that they had headaches around the same time each day
- Melatonin is decreased in cluster headache subjects compared to controls[2]
- Melatonin, corticosteroids, lithium, and valproic acid are all effective treatments for cluster headache
  - Can alter the circadian transcriptional-translational feedback loops[3]
- Alcohol sensitivity during a cluster cycle, but not outside of a cluster cycle

1. Rozen TD, Fishman RS. Cluster headache in the United States of America: demographics, clinical characteristics, triggers, suicidality, and personal burden. *Headache*. 2012;52(1):99–113.
2. Peres M Melatonin, the pineal gland and their implications for headache disorders. Cephalalgia. 2005;25(6):403–411.
3. Gloston GF, Yoo S-H, Chen Z. Clock-Enhancing Small Molecules and Potential Applications in Chronic Diseases and Aging. Front Neurol. 2017;8(March):1–12.

Treatment Strategies

- Abortive treatment of an individual attack
- Cycle Termination
- Cycle Prevention

Abortive Treatment

- Sumatriptan SC 4-6mg (FDA Approved)
  - Outside of the house
  - Triptan nasal sprays tend to be slower and less consistently effective
    - Sumatriptan and zolmitriptan
- Oxygen 100% via non-rebreather 10-12 l/min
  - Tanks or oxygen concentrator at home
- DHE NS, SC, IM, IV, or SC
- Lidocaine 4-6% nasal drops at headache onset and can repeat as needed

Robbins MS, Starling AJ, Pringsheim TM, Becker WJ, Schwedt TJ. Treatment of Cluster Headache: The American Headache Society Evidence-Based Guidelines. Headache. 2016 Jul;56(7):1093-106.

Cycle Termination

- Steroid tapers
  - Prednisone 60-80 mg/day tapered over 10 days- 8 weeks
- Occipital nerve blocks WITH steroid
- DHE
  - 0.5 -1mg IV q 8 h for 3 -5 days
  - 1 mg IM 1-2 times daily for 1 week
- Naratriptan 2.5 mg BID for 1 week

Cycle Prevention

- Verapamil 120-960mg/day
- Lithium 300-1200mg/day (or more),
- Lamotrigine 100-300mg/day
- Topiramate 100-200mg/day
- Sodium valproate 250-2500 mg/day
- Indomethacin 75-250 mg/day
- Melatonin 3-10 mg HS
- Others with less evidence: gabapentin, botulinum toxin
- LSD, psilocybin, 2-bromo LSD

Calcitonin Gene-related Peptide (CGRP)

- A neuropeptide heavily involved in migraine pathophysiology
- 2 forms
  - α: PNS and CNS (37 amino acid)
  - β: enteric nervous system (34 amino acid)
- A potent vasodilator
- Peripheral Nervous System
  - Vasodilation and mast cell degranulation
- Central Nervous System
  - Pain modulation, central sensitization

Wrobel Goldberg S, Silberstein SD. *CNS Drugs*. 2015;29(6):443-452; Edvinsson L, et al. *Nat Rev Neurol*. 2018;14(6):338-350.

CGRP: Location, Location, Location

- CGRP widely expressed in the:
  - Central nervous system
  - Trigeminovascular system
  - Dura
- Actions:
  - Vasodilation
  - Inflammation
  - Pain transmission

Goadsby et al. *Physiol Revs* 2017;97:553-622; Edvinsson L et al. *Neurotherapeutics*. 2010;7:164–175. (AHS First Contact Slide Deck)

Galcanezumab

- The ONLY treatment FDA approved for the PREVENTION of episodic cluster headache (June 2019)
- Three 100mg syringes administered at onset of cluster cycle, and then monthly thereafter until cycle resolves
- 8-week, double-blind, placebo-controlled study
  - Monthly injections of galcanezumab 300 mg (N=49) Vs. Placebo (N=57)
  - Baseline weekly cluster headache attacks of 17.8 for galcanezumab and 17.3 for placebo
  - galcanezumab → Average 8.7 fewer weekly attacks over Weeks 1 to 3
    - 71.4% of patients had their weekly cluster headache attacks cut in half or more from baseline at Week 3
  - Placebo → Average 5.2 fewer weekly attacks over Weeks 1 to 3
    - 52.6% of patients had their weekly cluster headache attacks cut in half or more from baseline at Week 3

Goadsby PJ, Dodick DW, Leone M, Bardos JN, Oakes TM, Millen BA, Zhou C, Dowsett SA, Aurora SK, Ahn AH, Yang JY, Conley RR, Martinez JM. Trial of Galcanezumab in Prevention of Episodic Cluster Headache. N Engl J Med. 2019 Jul 11;381(2):132-141. doi: 10.1056/NEJMoa1813440.

Other Cluster Treatment Options

- Hand held external vagal nerve stimulator
- Occipital nerve stimulation
  - Implanted Vs. External…stay tuned
- Sphenopalatine ganglion (SPG) stimulator
  - Questionable availability
- Deep brain stimulation

Paroxysmal Hemicrania Criteria

- Severe or very severe unilateral orbital, supraorbital and/or temporal pain lasting 2-30 minutes if untreated
- Headache is accompanied by at least one of the following:
  - Ipsilateral conjunctival injection and/or lacrimation
  - Ipsilateral nasal congestion and/or rhinorrhoea
  - Ipsilateral eyelid edema
  - Ipsilateral forehead and facial sweating
  - Ipsilateral miosis and/or ptosis
  - A sense of restlessness or agitation
- Attacks have a frequency above five per day for more than half of the time
- Attacks are prevented absolutely by therapeutic doses of indomethacin

Paroxysmal Hemicrania Features

- Can have as many as 40 attacks per day
- Cycles can last 2 weeks to 4.5 months
- Remissions can last 1-36 months

Paroxysmal Hemicrania Treatment

- Indomethacin can be diagnostic and therapeutic
  - “In an adult, oral indomethacin should be used initially in a dose of at least 150 mg daily and increased if necessary up to 225 mg daily. Smaller maintenance doses are often employed.”
- Rapid escalation and gradual wean
  - 25MG TID x 3 days
  - 50mg TID x 3 days
  - 75mg TID x 3 days
  - Gradual wean by 25mg weekly until minimum therapeutic dose a
  - Co-dosed with PPI
- If Indomethacin fails to control symptoms, consider a secondary diagnosis

Short-lasting Unilateral Neuralgiform Headache Attacks

- At least 20 attacks
- Moderate or severe unilateral head pain, with orbital, supraorbital, temporal and/or other trigeminal distribution, lasting for 1–600 seconds and occurring as single stabs, series of stabs or in a saw-tooth pattern
- At least one of the following five cranial autonomic symptoms or signs, ipsilateral to the pain:
  - conjunctival injection and/or lacrimation
  - nasal congestion and/or rhinorrhoea
  - eyelid oedema
  - forehead and facial sweating
  - forehead and facial flushing
  - sensation of fullness in the ear
  - miosis and/or ptosis
- Occurring with a frequency of at least one a day1
- Not better accounted for by another ICHD-3 diagnosis.

Short-lasting Unilateral Neuralgiform Headache Attacks

- SUNCT = Short-lasting Unilateral Neuralgiform headaches with Conjunctival injection and Tearing
  - Both of the following, ipsilateral to the pain:
    - conjunctival injection
    - lacrimation
- SUNA = Short-lasting Unilateral Neuralgiform headache attacks with cranial Autonomic symptoms
  - Only one or neither of conjunctival injection and lacrimation (tearing).

Short-lasting Unilateral Neuralgiform Headache Attacks

- Rarest of short-lasting headache
- Male predilection – 2.1:1
- Attacks lasting 5-250 (600) seconds each
- Attacks can occur 5-6 times per minute
- Severe stabbing pain in orbito-temporal area
- Marked ipsilateral conjunctival injection and tearing

SUNCT Treatment

- Lamotrigine 100-300 mg/day
- Gabapentin 900-2700mg/day
- Topiramate 50-400mg/day

Hemicrania Continua Diagnostic Criteria

- Unilateral headache present for >3 months, with exacerbations of moderate or greater intensity
- Either or both of the following:
- at least one of the following symptoms or signs, ipsilateral to the headache:
  - Conjunctival injection and/or lacrimation
  - Nasal congestion and/or rhinorrhoe
  - Eyelid oedema
  - Forehead and facial sweating
  - Miosis and/or ptosis
- A sense of restlessness or agitation, or aggravation of the pain by movement
- Responds absolutely to therapeutic doses of indomethacin1
- Not better accounted for by another ICHD-3 diagnosis.

Hemicrania Continua

- Baseline low level hemicranial headache
- Superimposed exacerbations of severe pain
  - Often involves daily disabling peaks
  - Disabling peaks can last minutes to days
  - Ipsilateral autonomic features may only present with peak flares of pain
- Indomethacin-responsive

TAC, Cranial Neuralgia, or Primary Stabbing Headache?

- DIAGNOSTIC CRITERIA
  - A. Head pain occurring spontaneously as a single stab or series of stabs and fulfilling criteria B-D
  - B. Each stab lasts for up to a few seconds
  - C. Stabs recur with irregular frequency, from one to many per day
  - D. No cranial autonomic symptoms
  - E. Not better accounted for by another ICHD-3 diagnosis.

Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia. 2013 Jul;33(9):629-808.

Cranial Neuralgia or Primary Stabbing Headache?

- Transient and localized stabs of pain in the head that occur spontaneously in the absence of focal identifiable pathology
- When stabs are strictly localized to one area, structural changes at this site and in the distribution of the affected cranial nerve must be excluded.
- Involves extratrigeminal regions in 70% of cases.
- If cranial autonomic symptoms are present, think . Short-lasting unilateral neuralgiform headache attacks (SUNCT)
- Primary stabbing headache is more common in migraineurs
    - Stabs tend to be localized around areas of frequent migraine headache pain.

Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia. 2013 Jul;33(9):629-808.

Nerve Blocks

- Generally safe, well tolerated office based procedures
- Can be performed for the acute treatment of numerous headache disorders.
- Can have prolonged effects beyond the duration of the injected anesthetic at times lasting weeks to months

Afridi SK, Shields KG, Bhola R, Goadsby PJ. Greater occipital nerve injection in primary headache syndromes--prolonged effects from a single injection. Pain. 2006 May;122(1-2):126-9

Nerve Block Central Effects

- Peripheral nerve blocks may modulate central pain structures
- In one study, occipital nerve blocks were performed in the setting of an acute migraine with improvement of
  - Migraine pain
  - Brush allodynia in the trigeminal nerve distribution
  - Photophobia

Young W, Cook B, Malik S, Shaw J, Oshinsky M. The first 5 minutes after greater occipital nerve block. Headache. 2008;48:1126-1128.

Reasons To Perform Nerve Blocks

- ***Neuralgiaform pain in a nerve distribution
  - One and Done?
- Termination of a bad migraine cycle
- **Termination of a cluster cycle (with steroid)**
  - **Can try with any TAC, limited evidence**
- Routine office visit if time permits and pain is present
- Preventative therapy in a patient with refractory headache pain

DIARY USE IS CRITICAL?

- Establishes baseline
- Establish seasonal, weather associations
- Establish menstrual association
- Steers titrations
- Functional pain scale helps physician and patient agree on quantification of pain

Mathew PG, Mathew T. Taking Care of the Challenging Tension Headache Patient. Curr Pain Headache Rep.2011 Dec;15(6):444-50.

HARVARD MEDICAL SCHOOL | BWH BRIGHAM AND WOMEN'S HOSPITAL

PGM HEADACHE CALENDAR

MONTH:

DAYS	MENSES	INTENSITY (1-3 Mild, 4-6 Mod, 7-10 Disabling)	ABORTIVE MEDICATION USED
ex	P	1 2 3 4 5 6 7 8 9 10	N + S
1		1 2 3 4 5 6 7 8 9 10	
2		1 2 3 4 5 6 7 8 9 10	
3		1 2 3 4 5 6 7 8 9 10	
4		1 2 3 4 5 6 7 8 9 10	
5		1 2 3 4 5 6 7 8 9 10	
6		1 2 3 4 5 6 7 8 9 10	
7		1 2 3 4 5 6 7 8 9 10	
8		1 2 3 4 5 6 7 8 9 10	
9		1 2 3 4 5 6 7 8 9 10	
10		1 2 3 4 5 6 7 8 9 10	
11		1 2 3 4 5 6 7 8 9 10	
12		1 2 3 4 5 6 7 8 9 10	
13		1 2 3 4 5 6 7 8 9 10	
14		1 2 3 4 5 6 7 8 9 10	
15		1 2 3 4 5 6 7 8 9 10	
16		1 2 3 4 5 6 7 8 9 10	
17		1 2 3 4 5 6 7 8 9 10	
18		1 2 3 4 5 6 7 8 9 10	
19		1 2 3 4 5 6 7 8 9 10	
20		1 2 3 4 5 6 7 8 9 10	
21		1 2 3 4 5 6 7 8 9 10	
22		1 2 3 4 5 6 7 8 9 10	
23		1 2 3 4 5 6 7 8 9 10	
24		1 2 3 4 5 6 7 8 9 10	
25		1 2 3 4 5 6 7 8 9 10	
26		1 2 3 4 5 6 7 8 9 10	
27		1 2 3 4 5 6 7 8 9 10	
28		1 2 3 4 5 6 7 8 9 10	
29		1 2 3 4 5 6 7 8 9 10	
30		1 2 3 4 5 6 7 8 9 10	
31		1 2 3 4 5 6 7 8 9 10	

Use P to indicate days of your menstrual period.

Use abortive medication abbreviations like T for Tylenol.

Combinations of medications like Naproxen and Sumatriptan can be written as N + S

Nerve Block Composition

- Nerve blocks are performed with an anesthetic with or without a steroid
- Anesthetic is usually lidocaine, bupiviaine, or a combination.
  - 0.75% bupivicain is my preference
- Steroids added can include methylprednisolone and triamcinolone
- Steroid alone proven to be useful, but lack of immediate relief makes this less successful;

Ambrosini A, Vandenheede M, Rossi P, Aloj F, Sauli E, Pierelli F, Schoenen J. Suboccipital injection with a mixture of rapid- and long-acting steroids in cluster headache: a double-blind placebo-controlled study. Pain. 2005 Nov;118(1-2):92-6.

Caution With Steroids

- Avoid in patients with…
  - Cushing's syndrome, glaucoma, cutaneous atrophy, alopecia
- Avoid in cosmetic areas
  - Facial cosmetic disfigurement
- Avoid short interval serial injections
  - No more frequently than 3 months

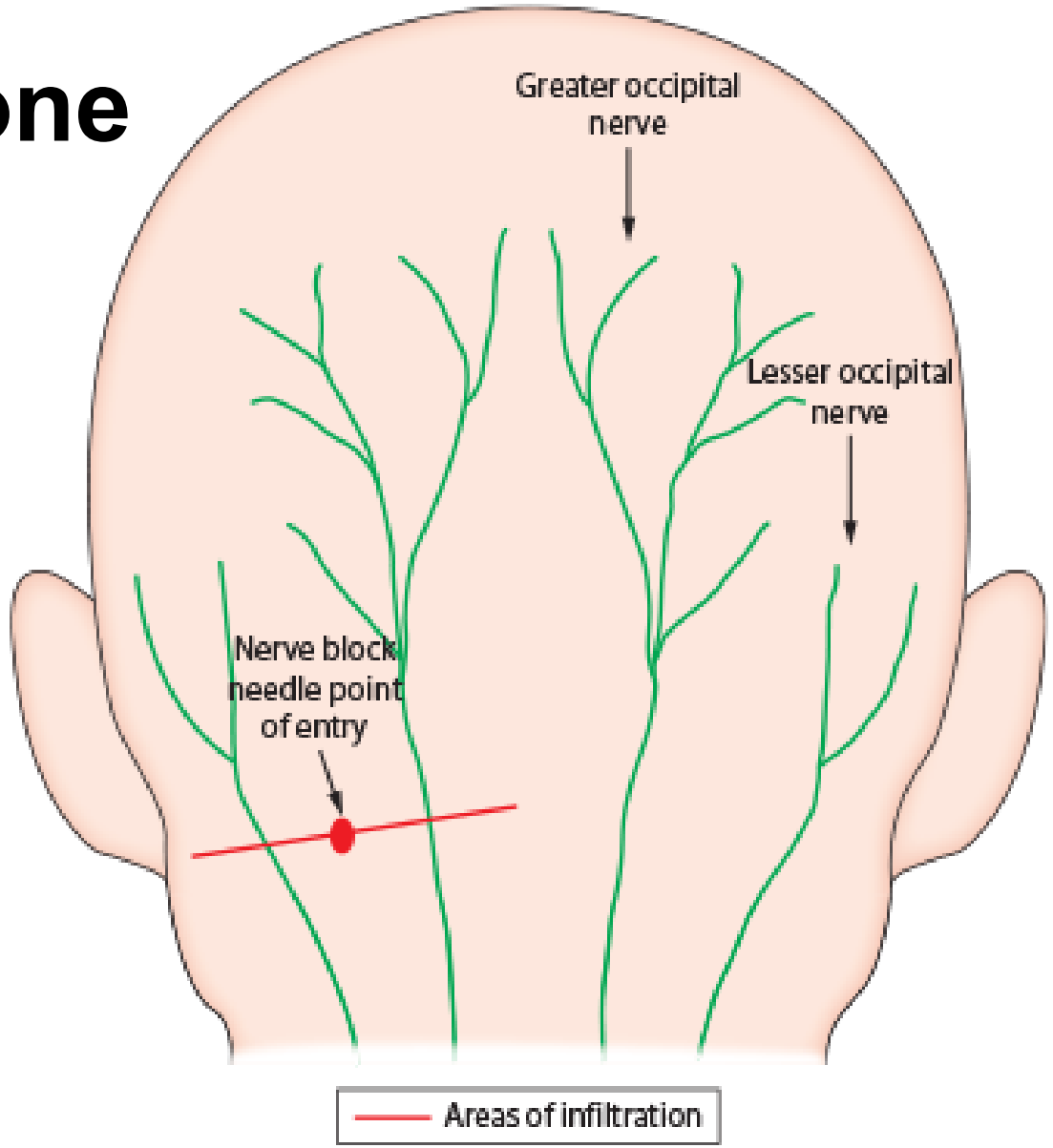
1. Lambru G1, Lagrata S, Matharu MS. Cutaneous atrophy and alopecia after greater occipital nerve injection using triamcinolone. Headache. 2012 Nov-Dec;52(10):1596-9.
2. Tripathi RC, Parapuram SK, Tripathi BJ, Zhong Y, Chalam KV. Corticosteroids and glaucoma risk. Drugs Aging. 1999 Dec;15(6):439-50.

Positioning

- Occipital nerve blocks
  - Prone
- Auriculotemporal/Supraorbital/Supratrochlear
  - Supine
- Ensure patient and provider are comfortable
  - Improves patient tolerance
  - Reduces provider fatigue over multiple procedures
  - Stable head limits needle torque while in skin and needle sticks
  - Syncope/seizure risk

Ambrosini A, Vandenheede M, Rossi P, Aloj F, Sauli E, Pierelli F, Schoenen J. Suboccipital injection with a mixture of rapid- and long-acting steroids in cluster headache: a double-blind placebo-controlled study. Pain. 2005 Nov;118(1-2):92-6.

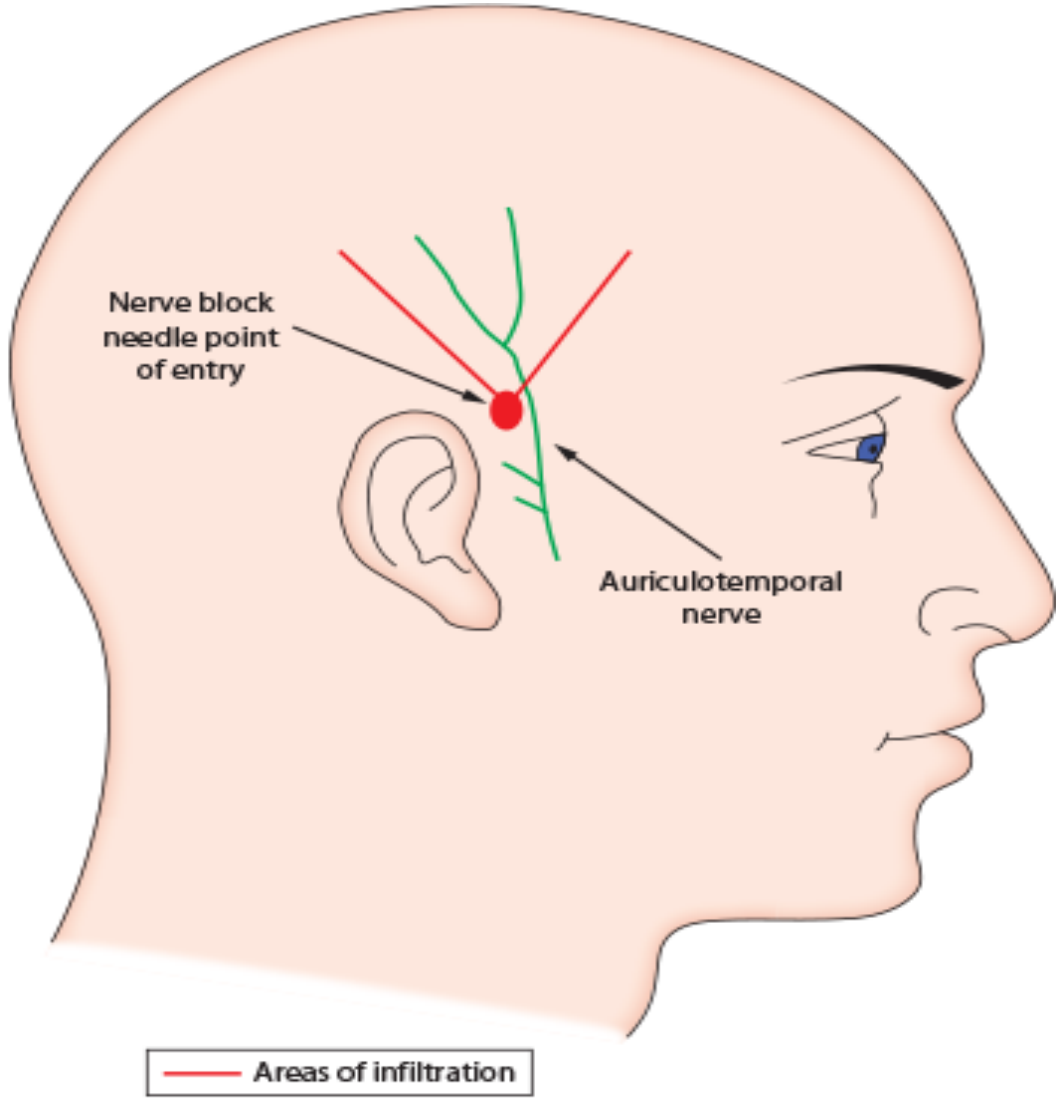
Occipital Nerve BlockProne 6cc Per Side



Source: Zahid H. Bajwa, R. Joshua Wootton, Carol A. Warfield: *Principles and Practice of Pain Medicine*, 3rd Edition
www.accessanesthesiology.com

Artwork by,
Paul G. Mathew, MD, DNBPAS, FAAN, FAHS

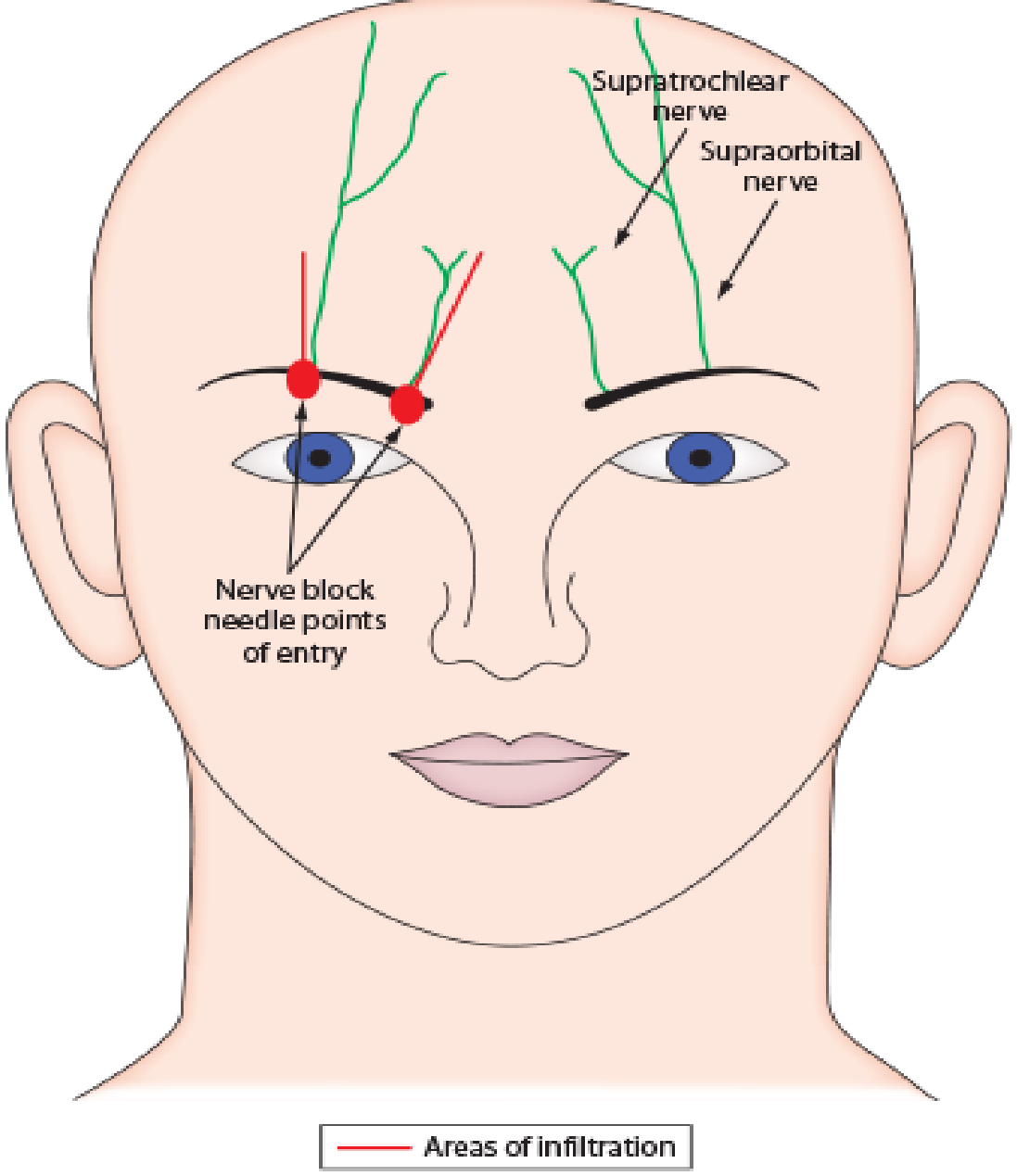
Auriculotemporal Nerve Block Supine 2cc Per Side



Source: Zahid H. Bajwa, R. Joshua Wootton, Carol A. Warfield: *Principles and Practice of Pain Medicine*, 3rd Edition
www.accessanesthesiology.com

Artwork by,
Paul G. Mathew, MD, DNBPAS, FAAN, FAHS

Supraorbital/Supratrochlear Nerve Block
Supine, 0.5-1cc Per Foramen



Source: Zahid H. Bajwa, R. Joshua Wootton, Carol A. Warfield: *Principles and Practice of Pain Medicine*, 3rd Edition
www.accessanesthesiology.com

Artwork by,
Paul G. Mathew, MD, DNBPAS, FAAN, FAHS

A Case…

- A 51 year old man presents to the office with headache
- History of infrequent and very severe headaches since the age of 18
- Pain in the sinus area, usually on the right.
- No phonophobia, nausea, vomitting
- Can have photophobia on the right side

Case Continued….

- Tend to occur with the change of seasons
- Started having his current sinus headache in last September
- Triptans and NSAID’s have been ineffective

Case Continued….

- Physical examination unremarkable except for ptosis and conjunctival injection
- What other questions do you want to ask?

  Duration of a single attack?
  Treatments for attack termination?
  Treatments for period termination?
  Treatments for period prevention?
  Imaging?

A Case…

- A 30 year old woman presents to the office with headache
- History of infrequent and mild headaches since the age of 8
- Holocephalic, pressure with maxiumum 5/10 pain
- No photophobia, phonophobia, nausea, vomitting

Case Continued….

- About 5 months ago, developed a different type of headache
- Has been daily since onset in the right forehead
- Triptans and NSAID's have been ineffective

Case Continued….

- Physical examination unremarkable except for forehead tenderness.
- What other questions do you want to ask?

What happened 5 months ago?

QUESTIONS???