Headaches You Will See in Your Clinics, and in the ER, and on your Neurology Rotation…

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December 15, 2015

Chief Complaint:
My Head Hurts…
(Oh my.)

Your task:

Is the headache primary or secondary?

If it's secondary, do you need to do anything emergently?

After ruling out the red flags, what can you do to help them?

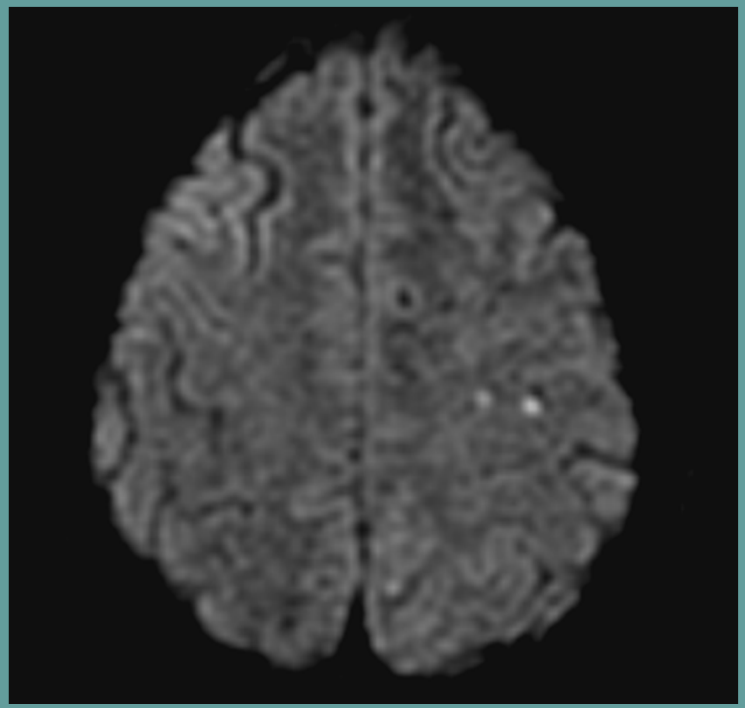
S_2NOOP_2

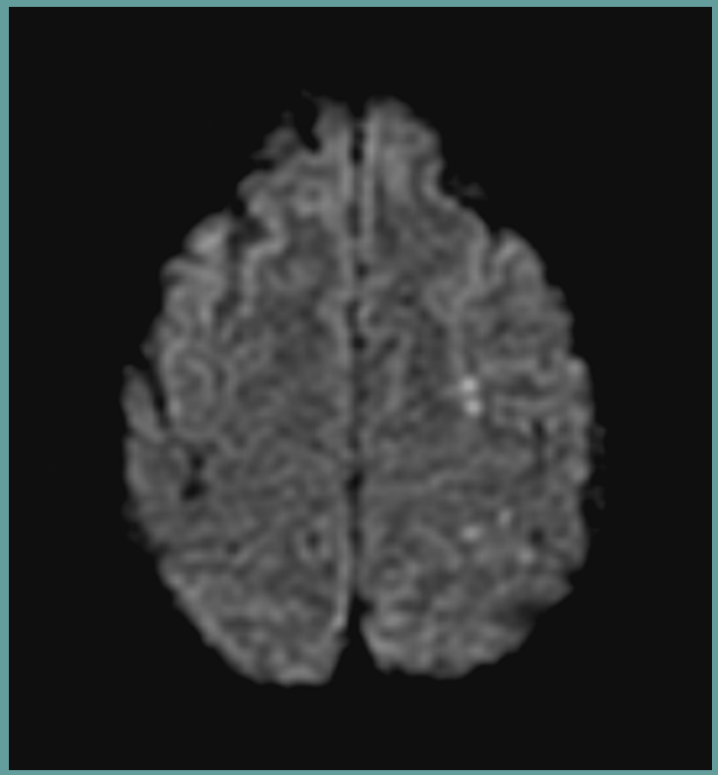
- Systemic Symptoms
- Secondary Risk Factors / Underlying Disease
- Neurologic Symptoms
- Onset: sudden, abrupt, Tclap
- Older age at onset or progressive >50years
- Pattern Change
- Previous HA History: difference

46-year-old female with 15 minutes of right-hand clumsiness

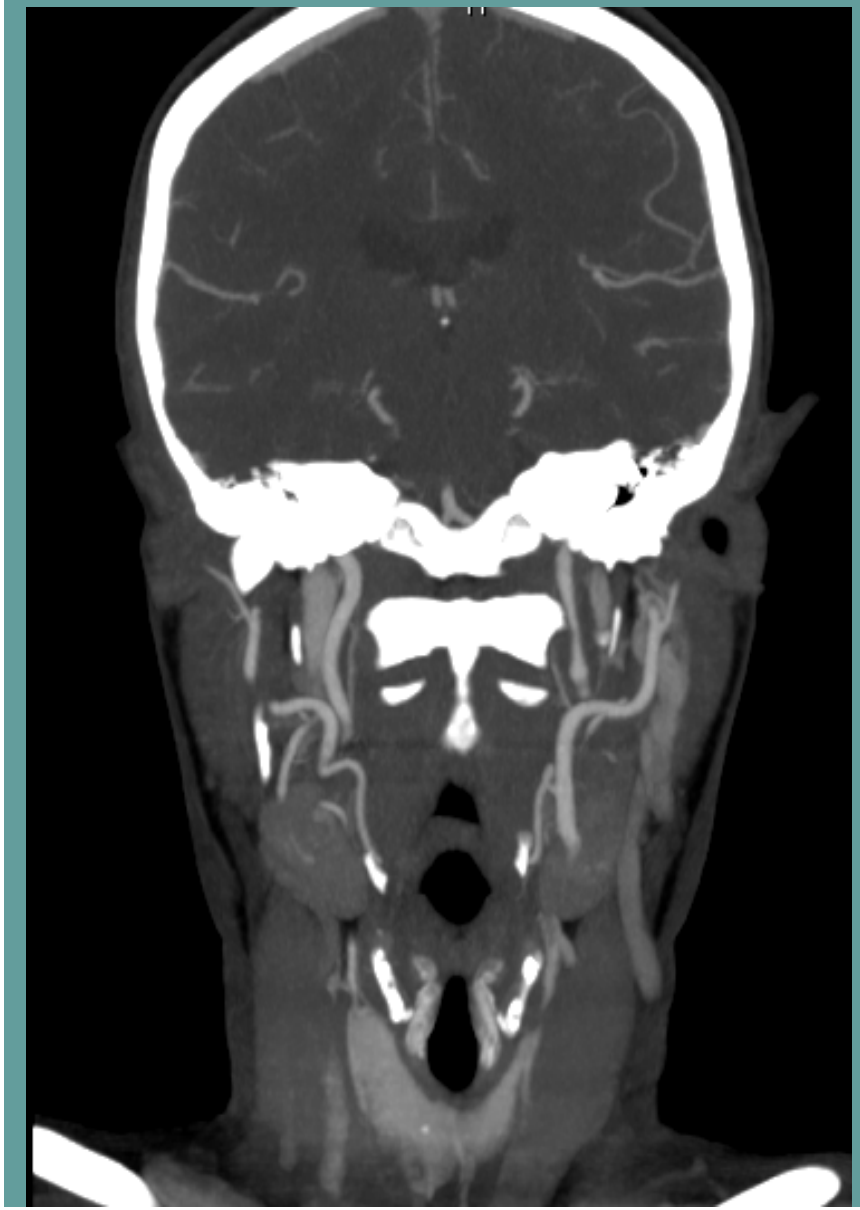
- 43yo elementary teacher was at home with her husband when she had the sudden onset of a 9/10 left-sided headache. This was followed by difficulty opening her hand, then had numbness of the right UE. The weakness and numbness resolved within 10 minutes. Since the event, she's had "swishing" in the left ear that won't go away. Her neck is stiff, left > right.
- No past medical history; no medications. No recent unusual events or illness.
- Vitals: 105/61 76 16 Afebrile
- CTH negative
- She was admitted to obs.

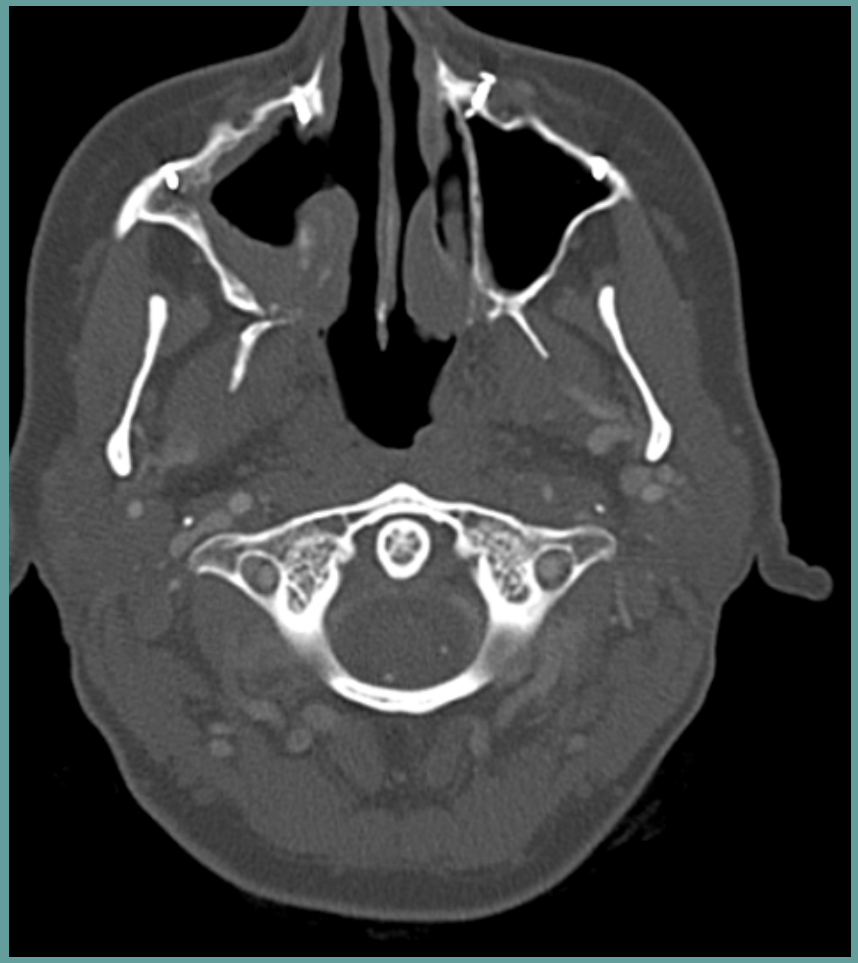
43F MRI





43F CTA





Cervical Artery Dissection

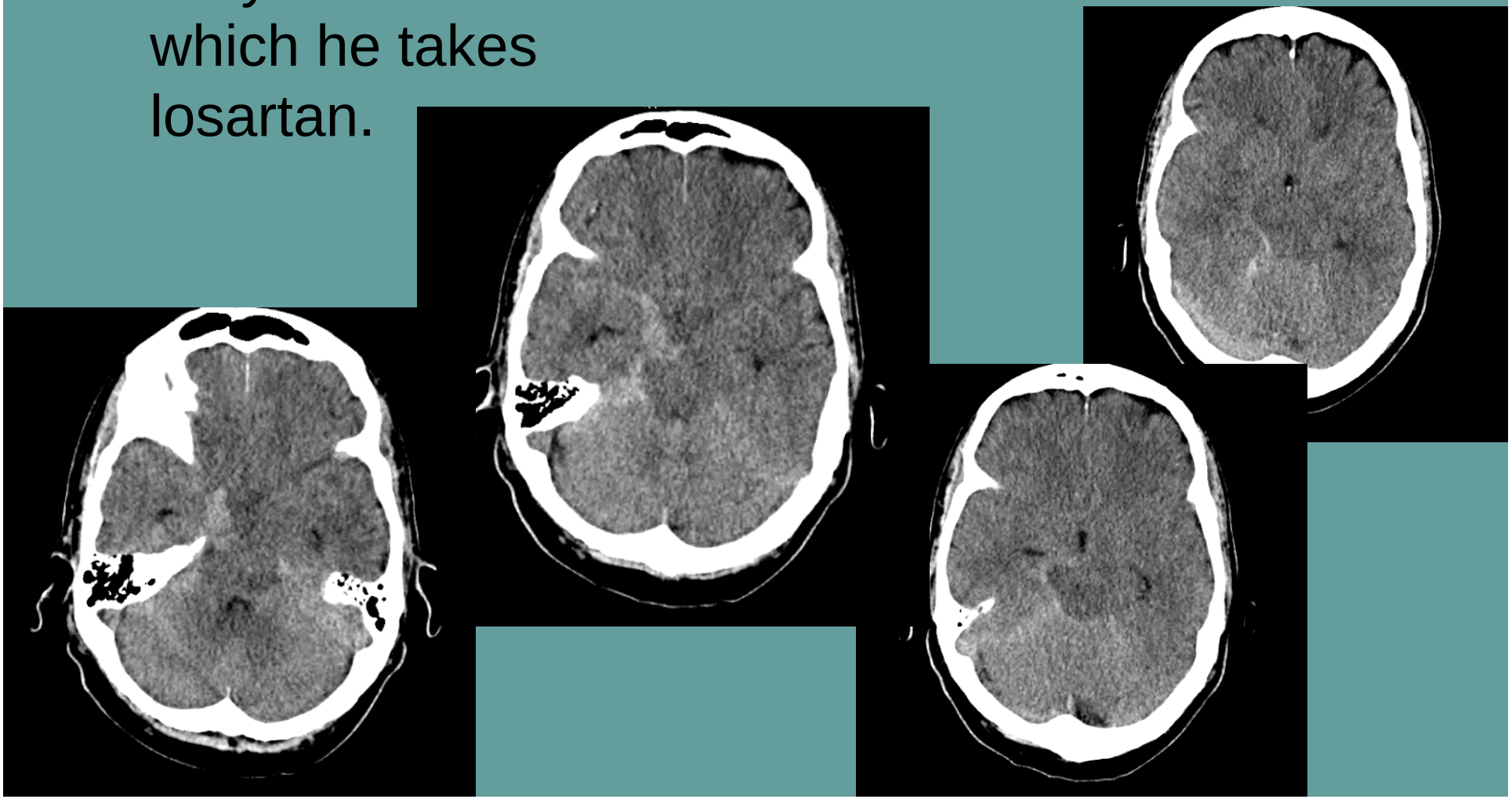
- One of the leading causes of stroke in young people.
- Possible etiologies: trauma, whiplash, chiropractic HVLA, strong cough or vomiting, fibromuscular dysplasia, collagen vascular disease, spontaneous
- Typically with ipsilateral neck pain
- Often with stroke
- Treatment: aspirin; rarely AC

TClap HA DDx

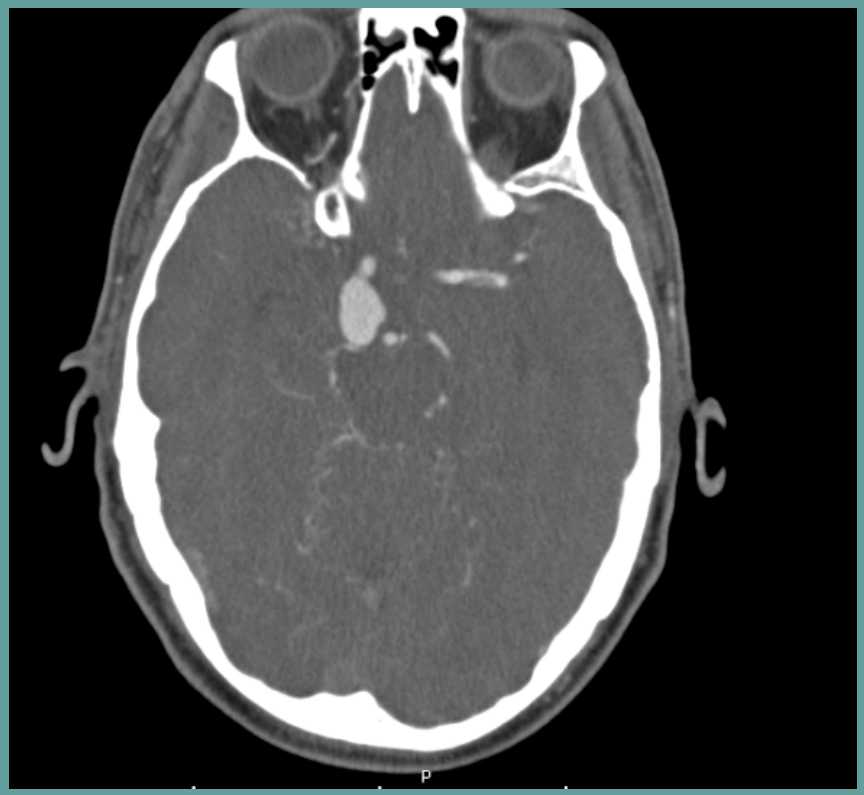
- Aneurysmal SAH
- Cervical artery dissection
- CVST
- RCVS
- Primary TClap HA
- ICH / SDH
- PRES
- Fulminant Infection
- Pituitary apoplexy

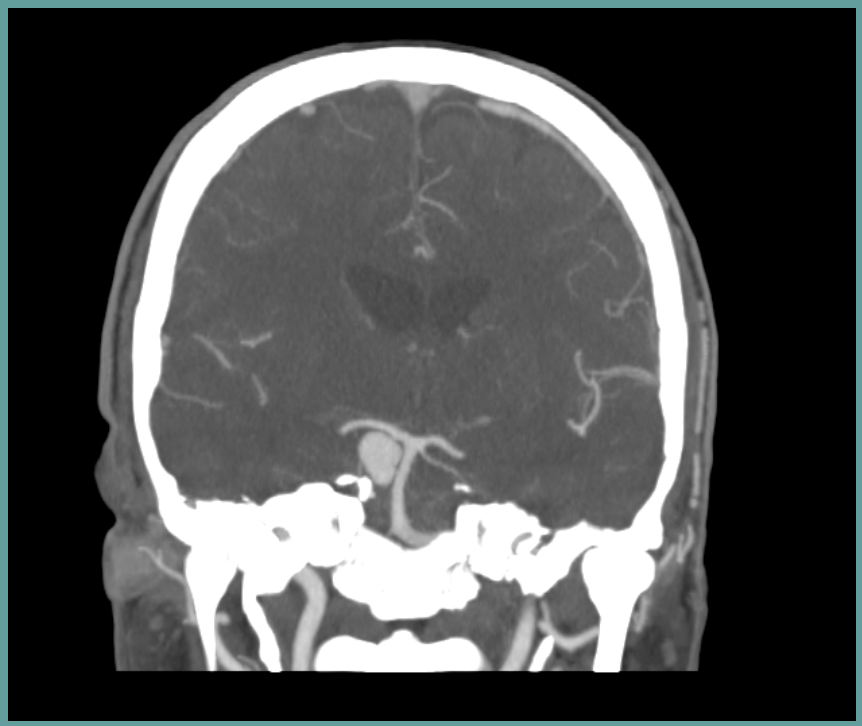
63yo Male with Sudden-onset HA at the grocery store

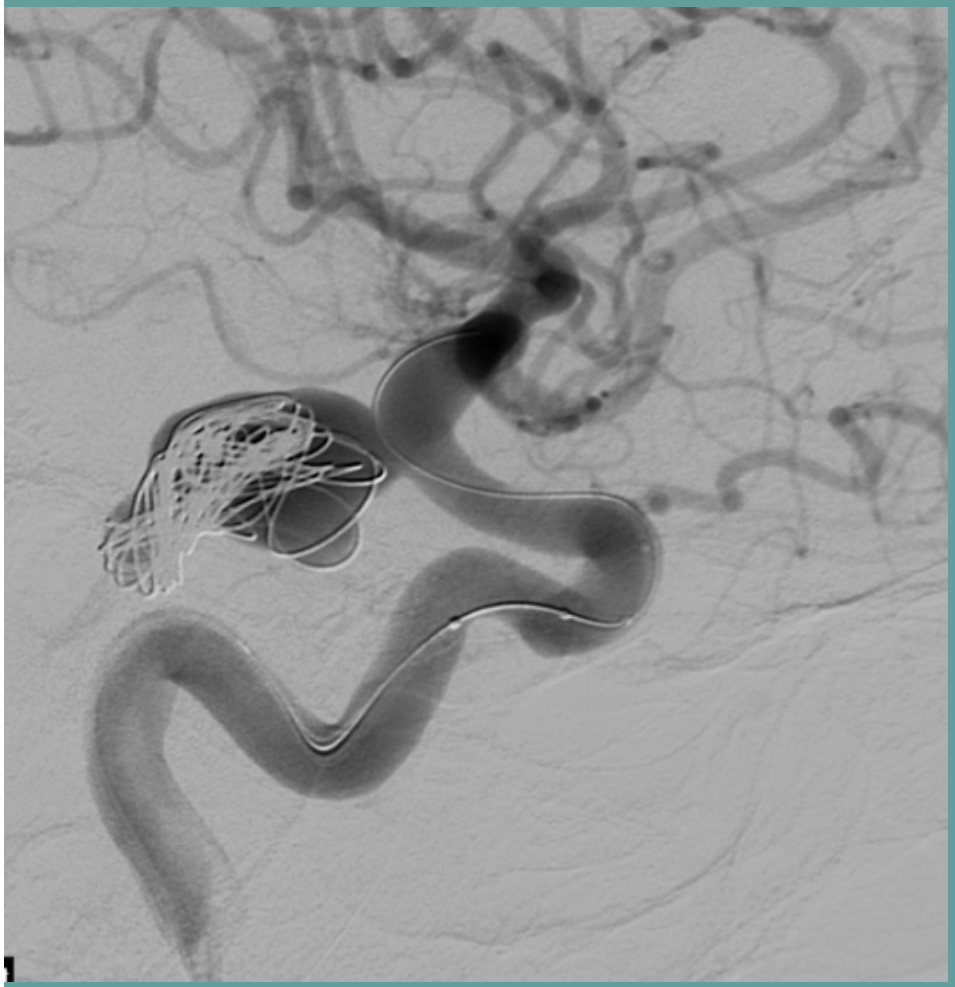
- Only PMHx is HTN for which he takes losartan.

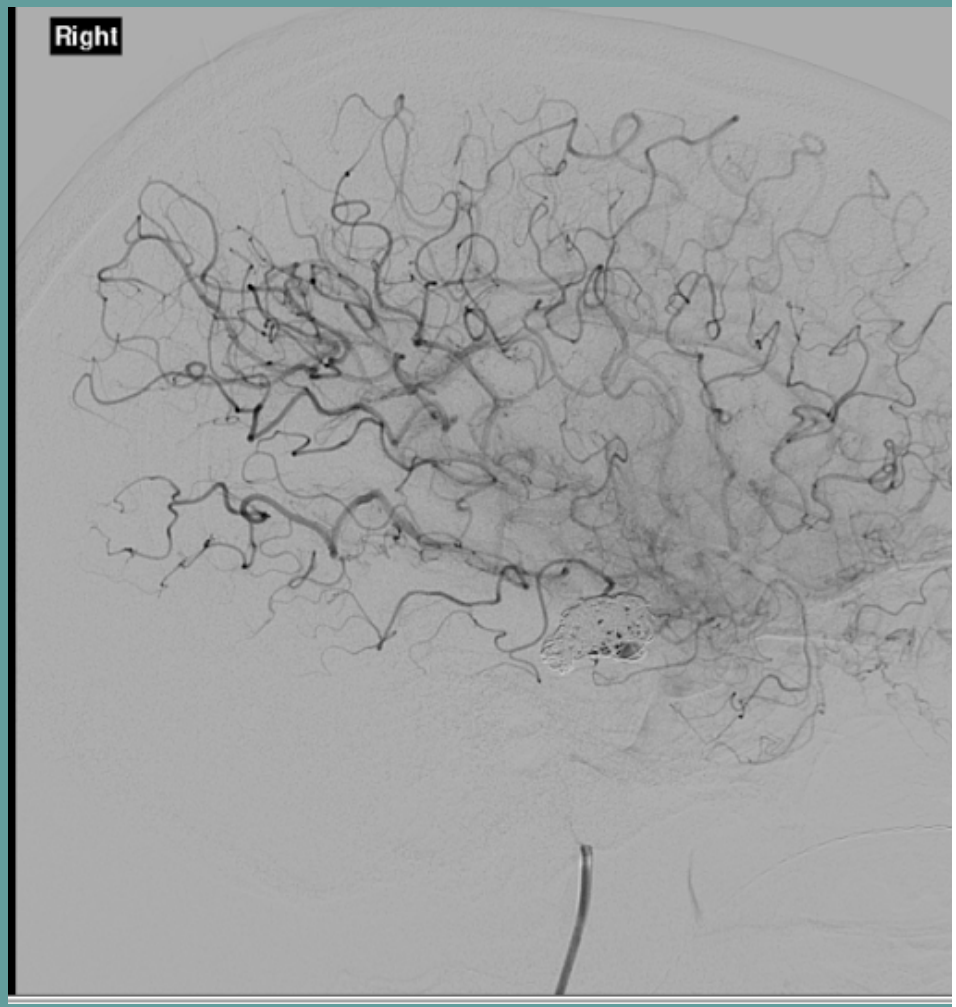


63M CTA



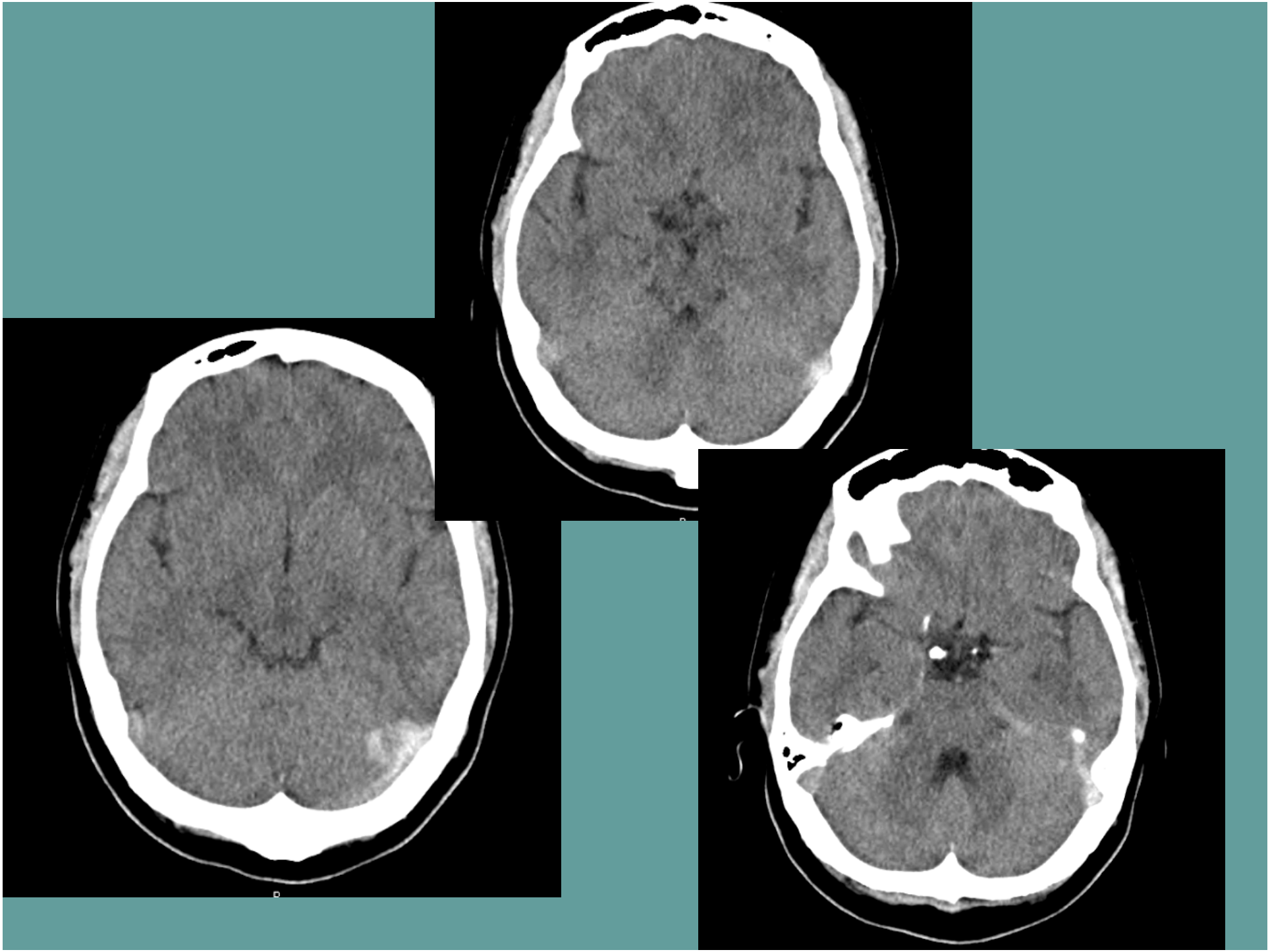


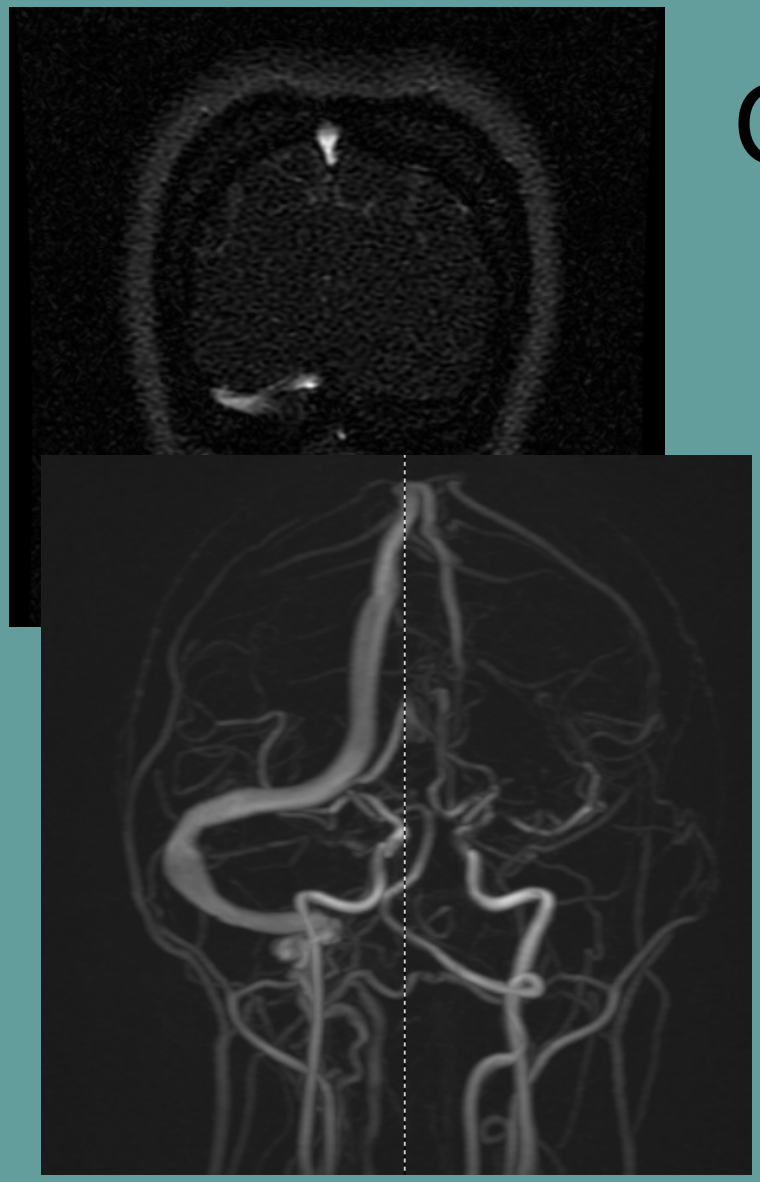



Right

23F Is One-week Post-partum

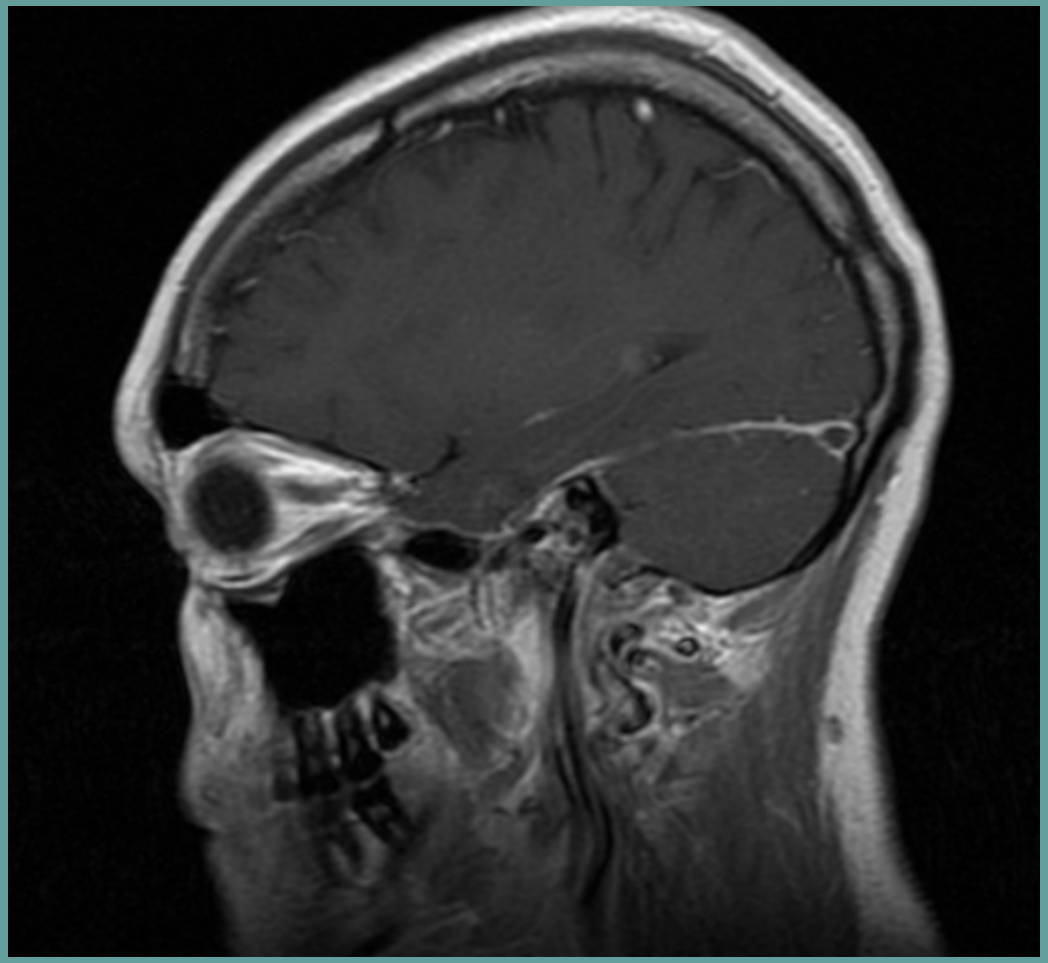
- Developed a subacute onset headache over the past two days that is intractable, 8/10. She is nauseous and describes intense pressure behind her eyes and posterior.
- No prior medical history other than recent delivery with normal pregnancy. No history of headaches.
- CTH completed in the ER…





CVST

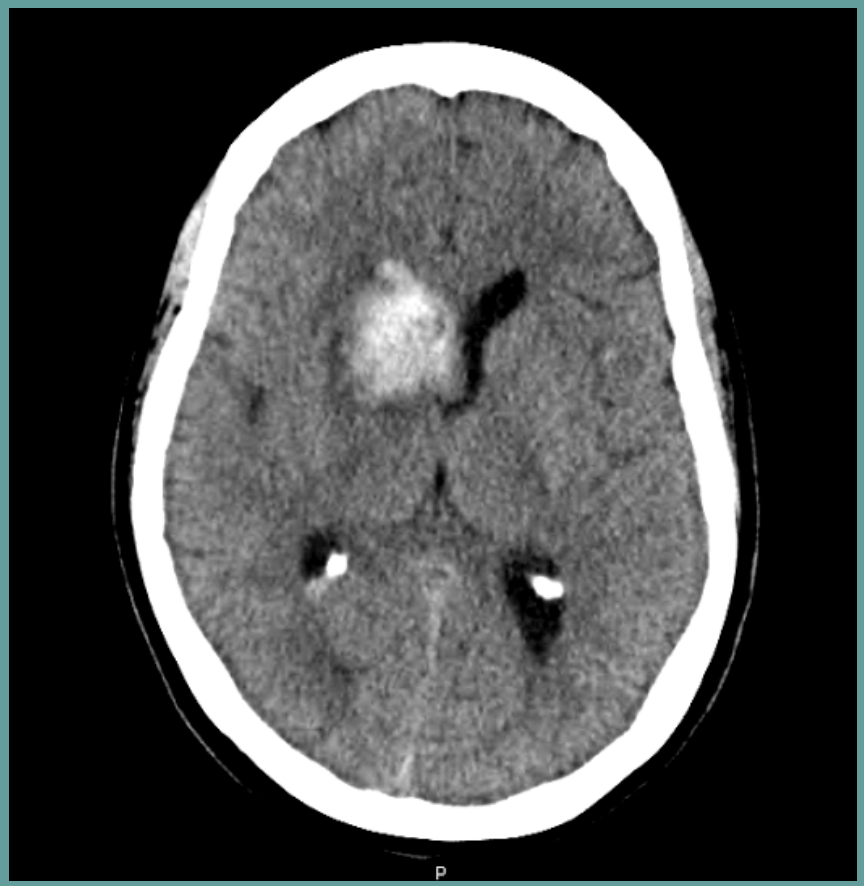
- RFs: hypercoag states, cancer, HRT, OCPs, pregnancy and post-partum, dehydration
- Mimics IIH
- Venous infarcts (odd territories)
- Hemorrhage
- Seizures
- Treatment: acute and ongoing

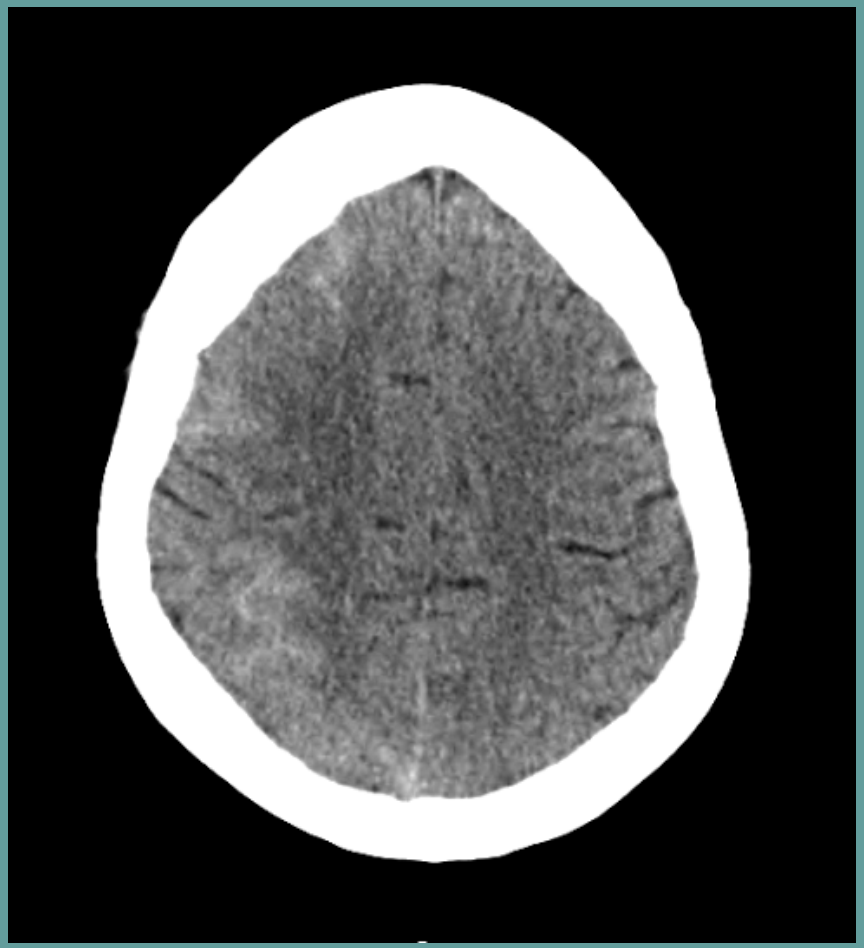


38-year-old Woman

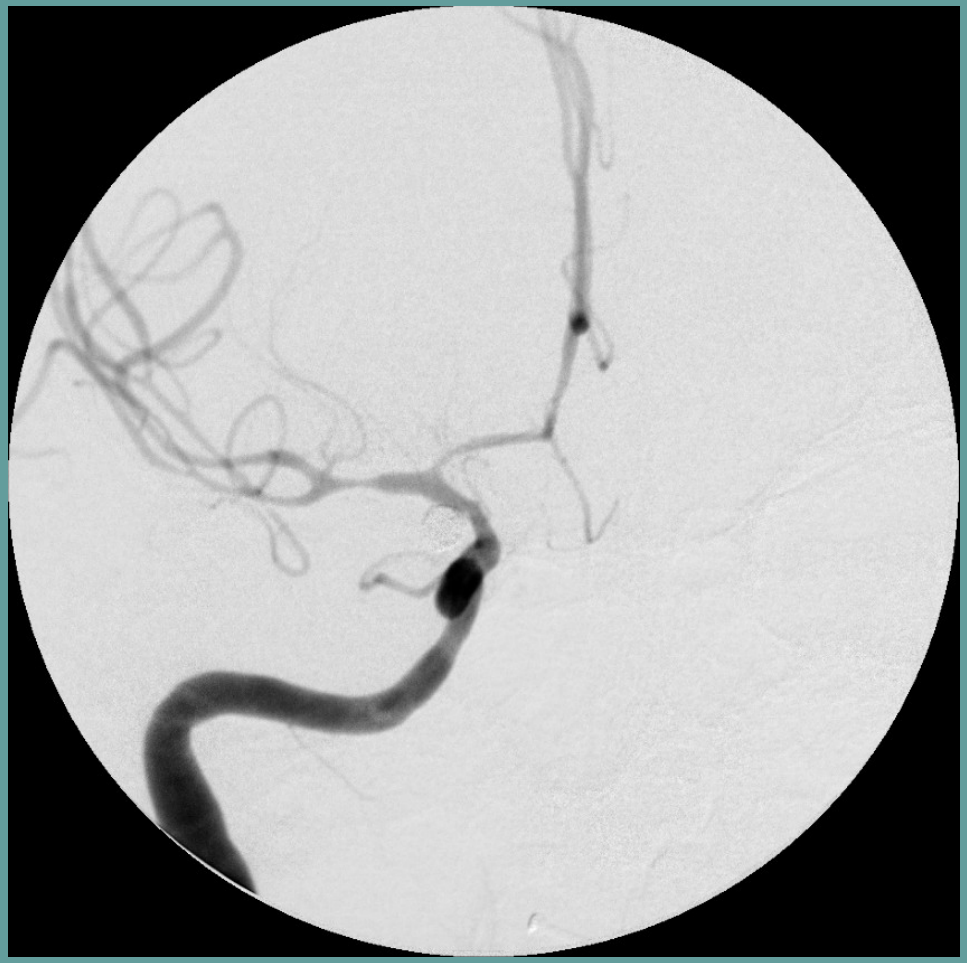
- 38yo woman with anxiety, on two antidepressants and a sleeping pill, presented to the ER with mild left-sided weakness. She had been having an intractable headache with thunderclap onset and lethargy, bed-bound for five days, with episodes of syncope at home.
- Who knows why her family didn’t bring her in sooner, but…

38F CTH





38F CTA or Angio

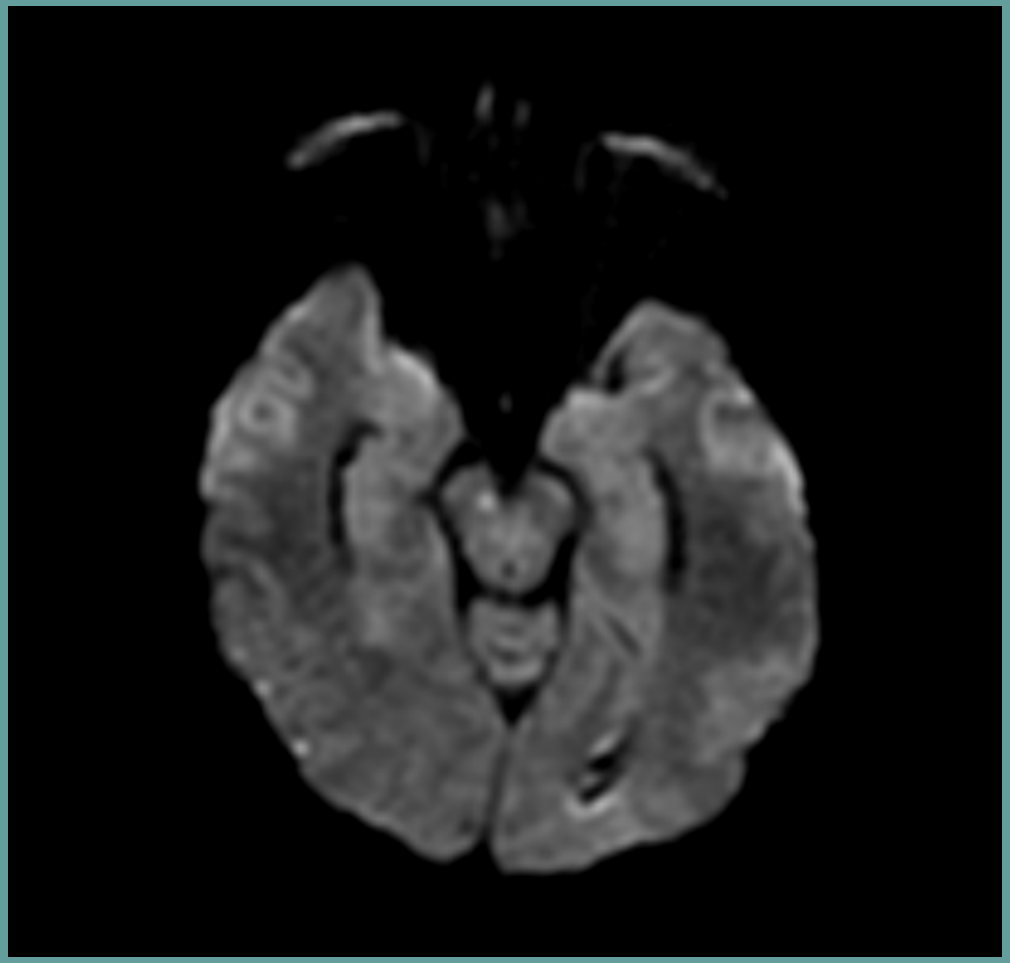


RCVS

- Vasospasm typically triggered by serotonergic or adrenergic stimulus.
- Recurrent Thunderclap Headaches
- Women 20-40
- Substances: SSRIs, cocaine
- Sometimes delayed imaging findings
- Associated with PRES, stroke, ICH, SAH

- Treatment:
  - Nimodipine 60mg Q4 initially and then can transition to verapamil
- Follow-up imaging
  - 3 months or sooner PRN
- Headache
  - Address phenotype, but avoid possible triggers

38F MRI



Other Secondary Headaches

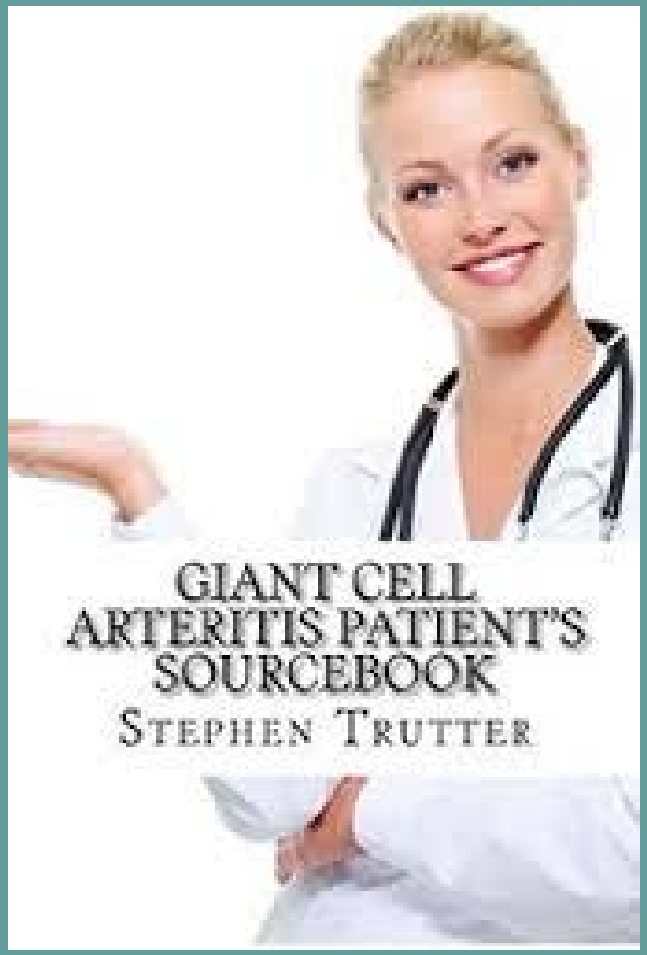
- Nonvascular:
- Cervicogenic
- Cranial neuralgia
- Intracranial hypertension
- Intracranial hypotension
- TMJ
- Infection
- Brain tumor
- Medications

- Vascular:
- Dissection
- SAH
- CVST
- RCVS
- AVM
- Cavernomas
- GCA

69F with new Headache

- 2 weeks of new headache, somewhat diffuse, poorly localized, near constant. On prompting has noted mild jaw pain and fatigue with chewing at meals. Had a history of migraine as a young adult, but this resolved after menopause and this headache is different.
- Five days ago she had a 20-second episode of vision change in the right eye, like a curtain falling down.
- Has had some moderate generalized fatigue
- On exam she is alert, oriented, in NAD but concerned as the HA is impacting her daily activities. No motor or sensory deficit. Normal vision exam. Her left temporal artery pulse is palpable but the right is hard to localize. She withdraws to palpation of the pulse as it feels tender.
- CTH negative
- Labs with thrombocytosis; mild anemia, normal CMP.
- ER doc wisely checks an ESR, which is 59. CRP is 4.

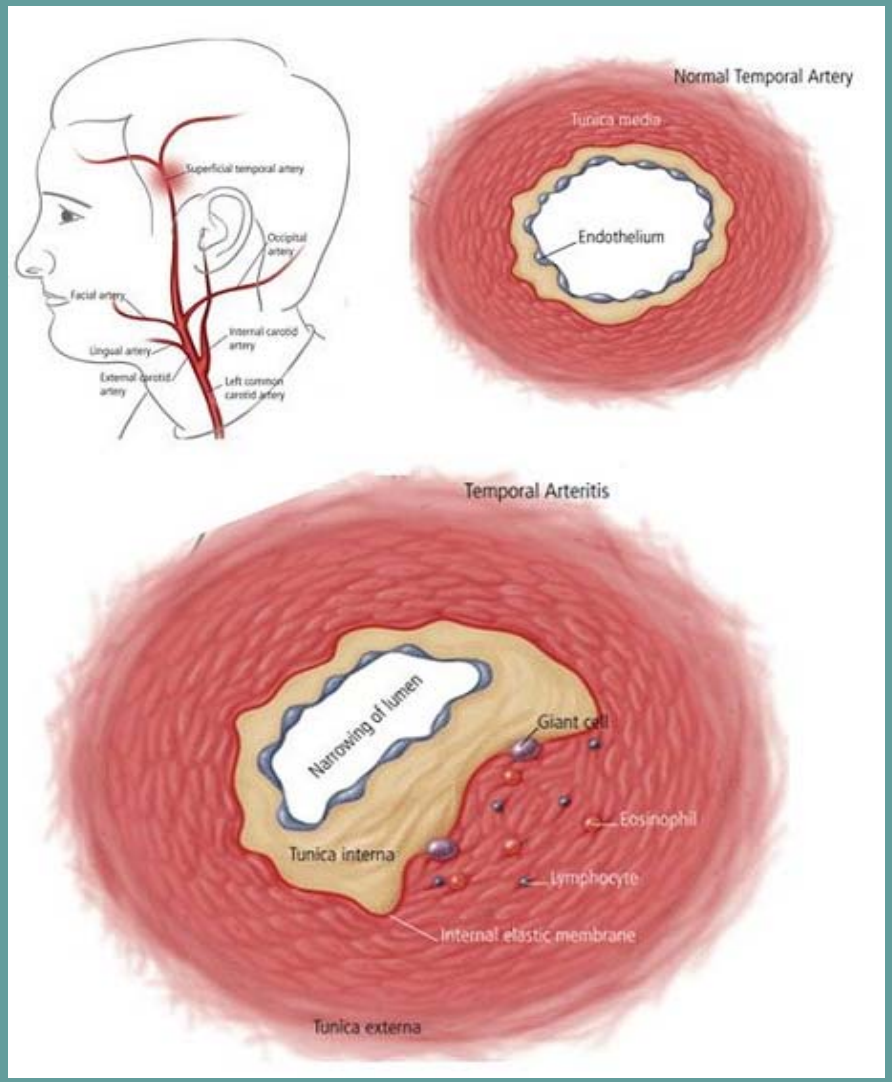
ACR diagnostic criteria for GCA



- 3 or more of:
- Age >50
- New-onset headache
- ESR >50 mm/hour
- Temporal artery tenderness or diminished temporal artery pulse
- Abnormal temporal artery biopsy

GCA

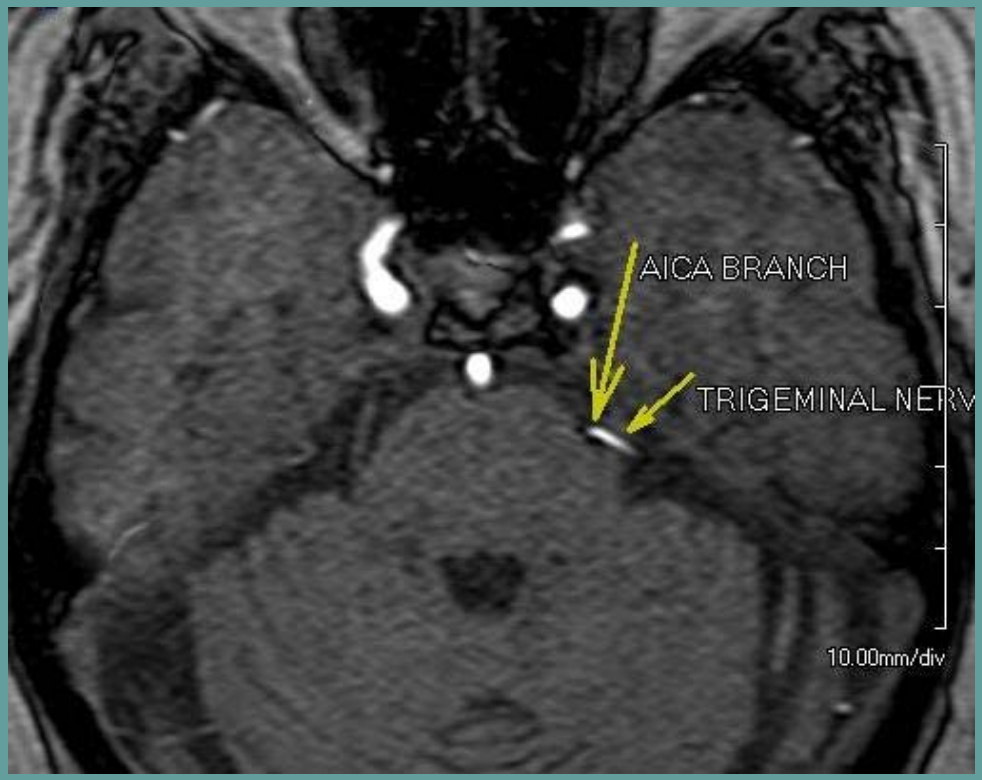
- Started on Solumedrol 1g/day and transitioned to 80mg PO.
- Temporal artery biopsy



54M with facial pain

- 2 months ago was brushing his teeth when he had severe, lancinating pain across the left cheek. It lasted 30 seconds, went away and then returned later in the day when he was talking with his wife.
- Intermittent since then, but halts his activity. He can’t sleep and he’s anxious waiting for the next round. His PCP started him on carbamazepine 50mg BID, but it hasn’t helped.
- You order…

54M MRI



TN

- Usually older than 50
- Unilateral
- V2-3
- 1sec to 2min
- Triggers
- Refractory period
- Usually older than 50
- Two types

- Treatment
- Carbamazepine
- Oxcarbazepine
- Lamotrigine
- Baclofen
- Gabapentin
- Rhizotomy (glycerol, RF)
- Surgery
- Gamma knife

Primary Headache Disorders

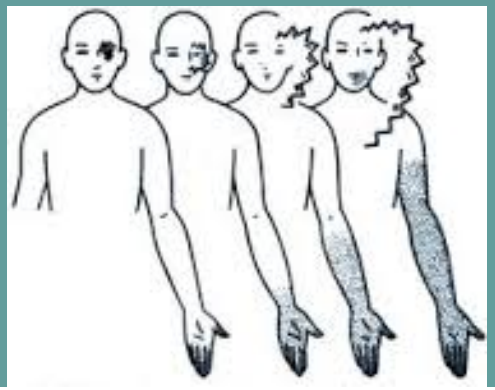
29F with left face and arm numbness

- Presents to the ER after a 35-minute episode of tingling in the left face and arm. During the paresthesias, she had difficulty talking to her husband. All resolved. About 20 minutes later she developed her typical migraine headache. She's never had sensory symptoms or trouble speaking before, so she came to the ER.
- Vitals: normal
- CTH: negative
- Exam is nonfocal though she's vomited once since arriving.

Diagnostic Criteria

Migraine without Aura

- >5 attacks
- 4-72 hours
- 2 of:
  - Moderate to severe intensity
  - Throbbing
  - Worsened by physical activity
  - Unilateral
- 1 of:
  - Nausea
  - Photophobia and phonophobia
- No secondary causes



Migraine w/Typical Aura

- >2 attacks of the criteria to the left
- Completely reversible visual, sensory and/or speech/language symptom
- 2 of:
- At least one symptom develops gradually over >5min and / or different symtpoms occur in succession over >5min
- Each aura lasts 5-60min (u to 180)
- >1 symptoms is unilateral
- Headache occurs during or follows the aura within 60 min

- ID Migraine
- Do you dislike light?
- Do you have nausea?
- Do your headaches impact work, school, recreational activities?

- 2/3 yes = sensitivity of 0.81 and specificity of 0.75 for migraine diagnosis

29F

- Would you image her?

- What would you tell her if she smoked and/or used OCPs?

Chronic Migraine

- Prior diagnosis of migraine
- Headache on greater than 15 days/month
- For at least 3 months
- 8 of those days, meets diagnostic criteria for migraine
- With/Without MOH

RFs for Transformation

- Medical Conditions
- Obesity
- Depression and/or anxiety
- Sleep disorders
- History of head/neck trauma

- Lifestyle
- Medication overuse
- Caffeine intake
- Poor stress coping skills
- Frequent headache at baseline
- Cutaneous allodynia

- Nonmodifiable
- Female
- Genetics
- Low education level
- Low socioeconomic status
- Younger age

Best preventive medications AAN and AHS 2012

- Level A
- Valproate 500mg-1000mg/day
- Propranolol 120-240mg/day
- Timolol 10-15mg BID
- Topiramate 25-200mg /day
- Botox 155 – 200 units

- Level B
- Amitriptyline25-150mg/day
- Riboflavin 400mg/day
- Venlafaxine ER 150mg/day
- Magnesium 400-600mg/day

- Level C
- Candesartan 16mg/day
- Lisinopril 10-20mg/day
- Cyproheptadine 4mg/day
- CoQ10100mg TID

Triptans

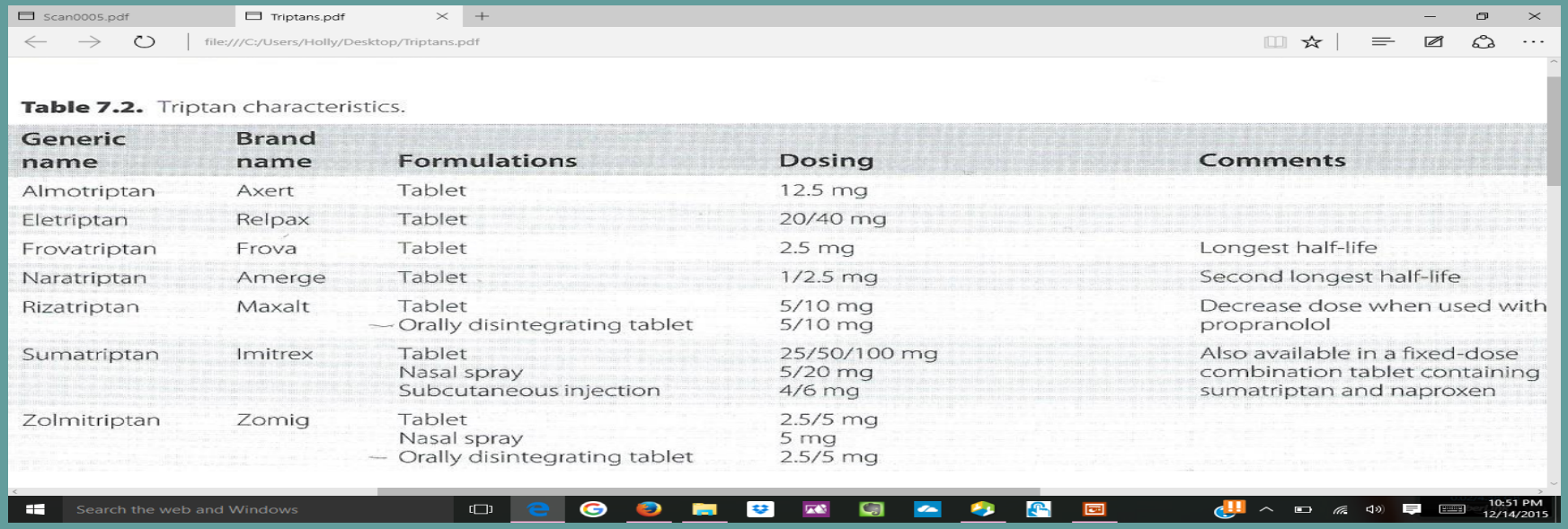

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Table 7.2. Triptan characteristics.

Generic name	Brand name	Formulations	Dosing	Comments
Almotriptan	Axert	Tablet	12.5 mg	
Eletriptan	Relpax	Tablet	20/40 mg	
Frovatriptan	Frova	Tablet	2.5 mg	Longest half-life
Naratriptan	Amerge	Tablet	1/2.5 mg	Second longest half-life
Rizatriptan	Maxalt	Tablet Orally disintegrating tablet	5/10 mg 5/10 mg	Decrease dose when used with propranolol
Sumatriptan	Imitrex	Tablet Nasal spray Subcutaneous injection	25/50/100 mg 5/20 mg 4/6 mg	Also available in a fixed-dose combination tablet containing sumatriptan and naproxen
Zolmitriptan	Zomig	Tablet Nasal spray Orally disintegrating tablet	2.5/5 mg 5 mg 2.5/5 mg	

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- Triptan Sensations
- Adequate Dose
- Use Early
- Use in combination

59F wants a refill on her Fioricet and Imitrex

- New patient to you with history of migraine without aura, anxiety. Her insurance changed and she needs a new PCP. Her previous gave her both medications.
- She tells you she has had an increase in the frequency of her headaches over the past year to about 20-25 days per month.
- You ask her how much Imitrex and Fioricet she's been using…
- She gets 18 sumatriptan and 20 Fioricet per month. She's taking at least one tablet, one or the other, daily.

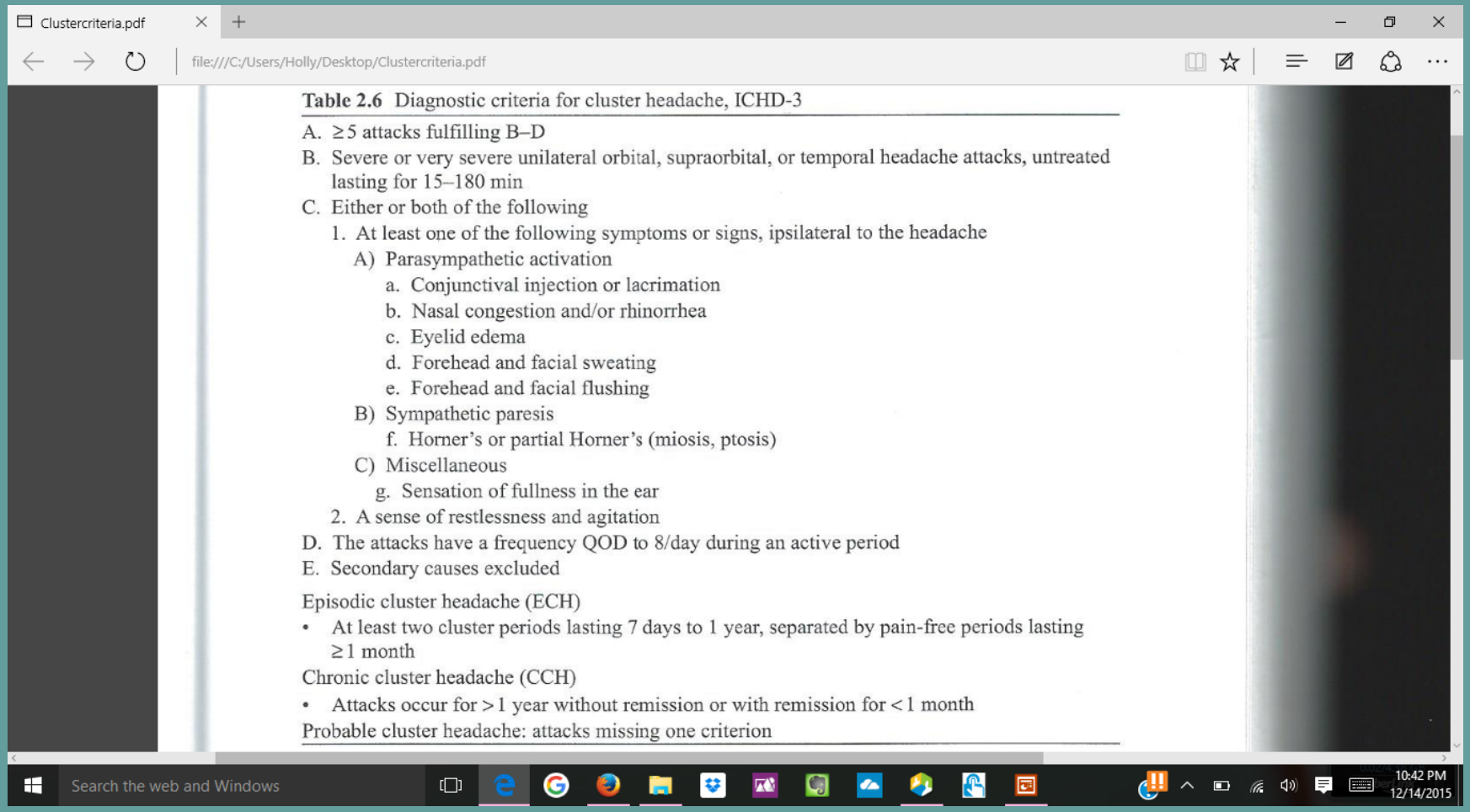
- Prevention of MOH is better than treating MOH
  - The more frequent the episodic headache, the more likely to develop MOH. Important to initiate effective prevention at the right time.
  - Education
  - Don’t use fioricet or opioids
  - Use triptans or NSAIDs on no more than 2 days/week
- Patient has to be ready for Detox
- Must be complete from the offending med with a wean… Benzos, butalbital and opioids require special handling…
- Strict limits on abortive use

44M comes to see you in October

- He has OSA and currently smokes a pack a day. Comes to see you with a 10-year-history of headaches that come for three weeks every November. They wake him every morning at about 0400, last about 30 minutes, then subside. Sometimes he has recurrences later in the day.
- He describes them as severe, 10/10, unbearable to the point that he has to walk around and hold his head until it subsides. The pain is always in his left forehead and retro-orbital. His left eye turns red and his left nostril runs.

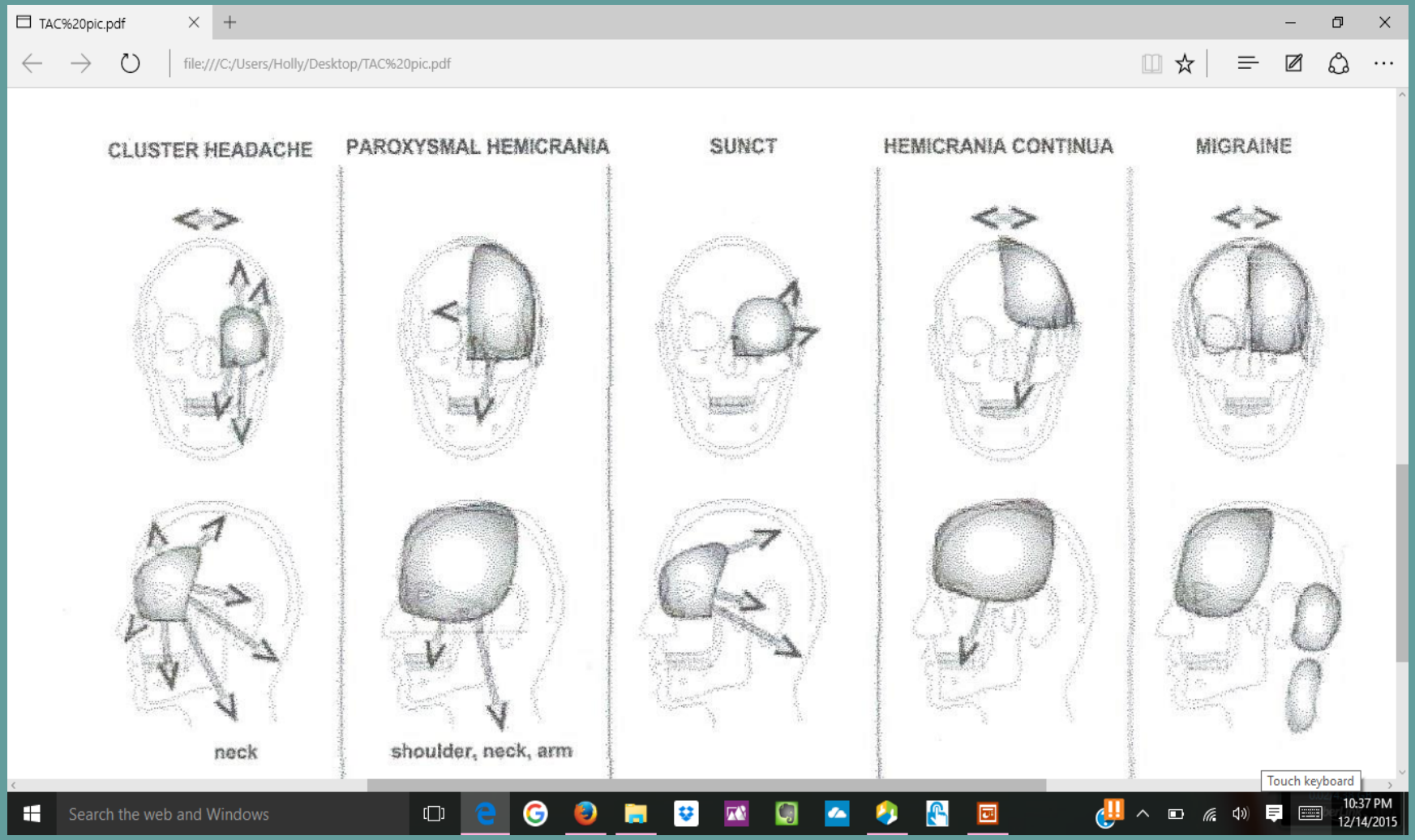
- Males 20-80
- Unilateral
- Often with OSA and tobacco use
- Alcohol is a consistent trigger, also excessive exercise and napping
- Agitation can make the diagnosis
- Suicide Headache
- Circadian and circannual periodicity

Cluster Headache



Other TACs

- Side-locked headaches
- Cranial autonomic features
- Unilateral photo/phonophobia
- All should have an MRI with/without contrast as 10% will have a lesion in the hypothalamus, pituitary or posterior fossa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shoulder, neck, arm
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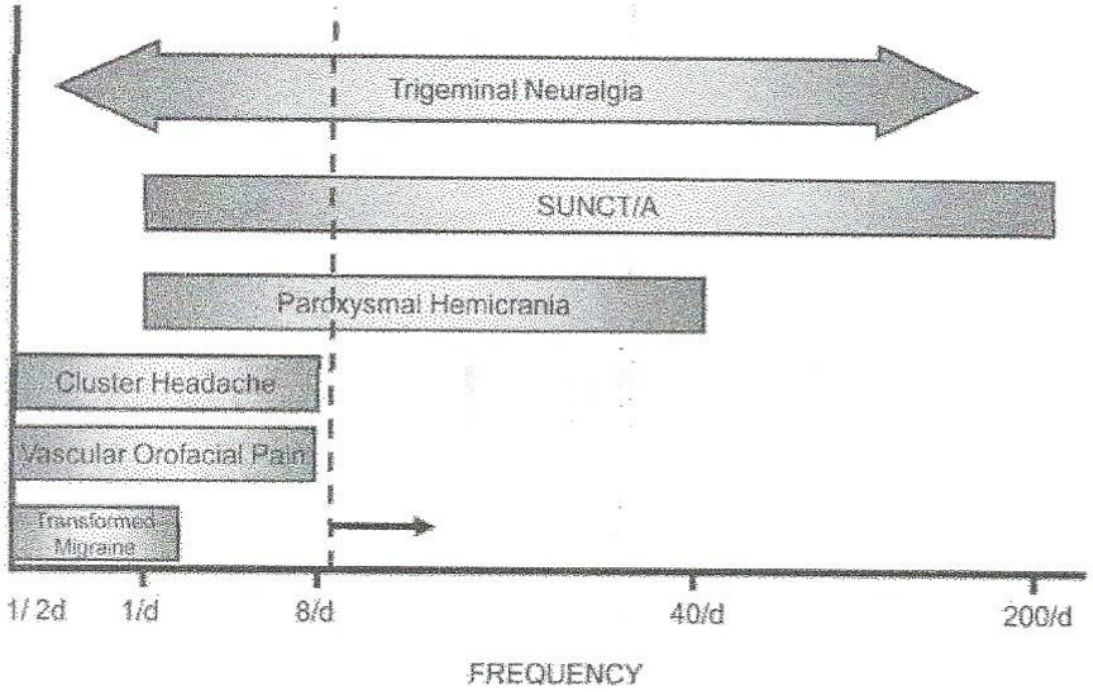

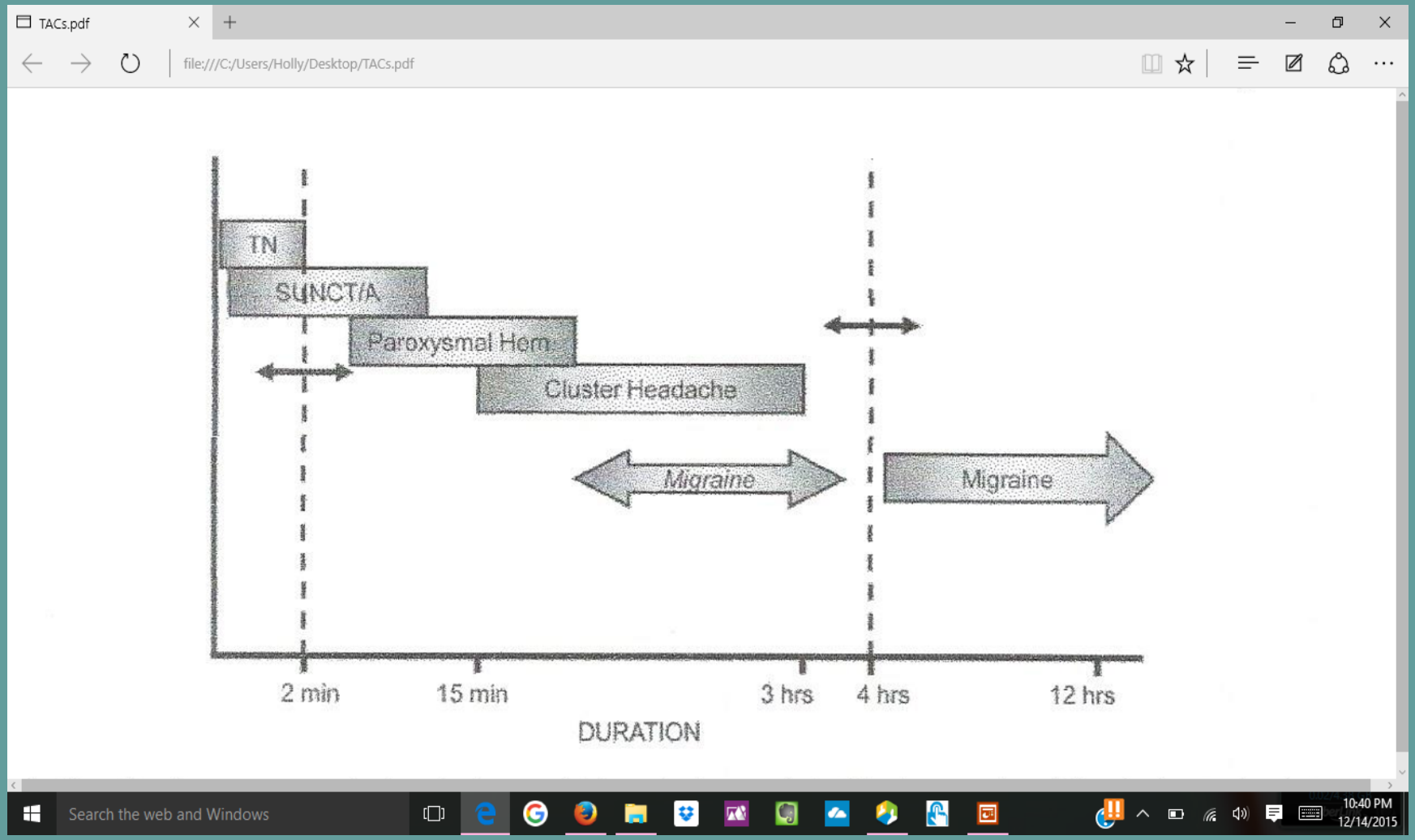
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TN
SUNCT/A
Paroxysmal Hem
Cluster Headache
Migraine
Migraine
2 min
15 min
3 hrs
4 hrs
12 hrs
DURATION
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49F with frequent headaches came to your office for something else

Other Primary Headaches

- Primary cough headache
- Primary exercise headache
- Primary headache associated with sexual activity
- Primary thunderclap headache
- Cold-stimulus headache
- Primary stabbing headache
- Nummular headache
- Hypnic headache
- New daily persistent headache