Initial Management of Headaches
- How to keep your patient out of the ED

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- Tension headaches
- Medication overuse headaches
- Migraine without aura
- Trigeminal autonomic cephalgias
- Worrisome headaches
- Guidelines for imaging
Edna

- 34 year old female
  - On PPI for GERD
- Headaches lasting 6-48 hours twice a month
  - Squeezing across forehead
  - Loud noises are bothersome
  - Doesn’t stop her from functioning
What type of headache does Edna have?

1. Migraine without aura
2. Chronic tension headache
3. Episodic tension headache
4. Sinus headache
5. Medication overuse (rebound) headache
6. Hemicrania continua

Tension-type headache

- Infrequent episodic tension-type headache
  - <1 per month
- Frequent episodic tension-type headache
- Chronic tension-type headache
  - 2-3% of the general population has chronic headache
- Probable tension-type headache

International Classification of Headache Disorders 3rd beta edition;
Headache Classification Committee to the International Headache Society, 2013
Frequent episodic tension headache

- Lasting minutes to days
- Bilateral, pressing or tightening pain of mild to moderate intensity
- Does not worsen with routine physical activity
- No nausea but photophobia OR phonophobia may be present
- At least 10 episodes occurring on ≥1 but <15 days per month for at least 3 months

International Classification of Headache Disorders 3rd beta edition;
Headache Classification Committee to the International Headache Society, 2013

Chronic tension headache

- Headache lasting minutes to days
- Bilateral, pressing or tightening (non-pulsating) pain of mild to moderate intensity
- Does not worsen with routine physical activity
- There may be mild nausea, photophobia OR phonophobia (one of the three)
- Headache occurring on ≥15 days per month on average for >3 months

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Headache Classification Committee to the International Headache Society, 2013
Additional considerations

- Tension headaches often co-exist with migraine. Headache diaries can be helpful to differentiate and prevent medication overuse
- Nocturnal development is uncommon

Edna

- Her sister says it’s not normal to have so many headaches
- She wonders if she should be taking something for it
- She avoids medicine out of concern of making reflux worse
  - Reflux always seems to be worse when she has headache
Treatment of choice for Edna?

1. Reassurance
2. Lifestyle changes
3. Rescue medication
4. OMM
5. All of the above

Tension headache treatment

- Lifestyle changes
  - Improved sleep
  - Stress management
  - Regular exercise
- OMM
- Physical therapy
- Management of depression
Tension headache treatment

- Limit all treatment to 2-3 days per week!

- NSAIDs
- Caffeine combinations

- Use butalbital containing compounds with caution
  - Higher risk of medication overuse headache

Tension headache treatment

- Caution with:
  - Muscle relaxers
    - No benefit over placebo
    - Consider non-medication treatments
  - Opioids
    - High risk of medication over-use
    - Relatively low pain severity/disability
Tension headache treatment

- Start preventative medication with 2-3 headaches per week
  - Amitriptyline 10-25 mg nightly to start
    - Clomipramine, nortriptyline, doxepin, protriptyline
  - Venlafaxine ER
  - Topiramate

- Daily medication can be tapered 6-12 months after effective treatment reached
Edna’s follow up appointment

- Headaches were better for a while
- Now they are worse – almost every day
- They start every morning
- Naproxen helped so much!

What type of headache does Edna have?

1. Migraine without aura
2. Chronic tension headache
3. Episodic tension headache
4. Sinus headache
5. Medication overuse (rebound) headache
6. Hemicrania continua
Medication overuse headache

- 15 or more days per month
- Regular overuse of acute and/or symptomatic treatment for >3 months
  - 15 days or more per month of simple analgesics
  - 10 days per month of triptans, ergotamine, opioids, & combination analgesics
- Headache has developed or markedly worsened during medication overuse

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Medication overuse headache

- Pre-existent headache disorder seems required to develop
- 2/3-3/4 of patients improve with removal of overused medications
- Withdrawal symptoms last 2-10 days
  - Worsening headaches
  - Shortest for triptans; longest for opioids

Variety of strategies
- Antiemetic
- Steroid burst
- Brief prophylactic period
- A different analgesic

Education is key

Relapse of 20-40% in the first year
George

- 34 year old healthy male
- Reports intermittent nausea lasting hours, worsened with movement
- Once a month for “a long time”
- Severe throbbing headache associated with recent ones

What type of headache does George have?

1. Migraine without aura
2. Chronic tension headache
3. Episodic tension headache
4. Sinus headache
5. Medication overuse (rebound) headache
6. Hemicrania continua
Migraine

- Migraine with aura
- Migraine without aura
- Childhood periodic syndromes that are commonly precursors to migraine
- Retinal migraine
- Complications of migraine
  - Chronic migraine
- Probably migraine

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Migraine without aura

- Attacks lasting 4-72 hours, less than 7 days a month
- Unilateral location
- Pulsating quality
- Moderate or severe intensity
- Aggravation by routine physical activity
- Associated with nausea and/or photophobia and phonophobia

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Acute migraine treatment

- Treat early!
  - Prodromal feelings
    - Mood change
    - Fatigue
    - Muscle tension
    - Yawning
    - Cognitive dysfunction
    - Anorexia

- Discuss timing with patient
  - Include why they don’t take it early
  - Limit to 2-3 days per week

Acute migraine treatment

- NSAIDs
- Triptans
  - No class effect
- Antiemetic
When should you start a preventative?

1. One headache per month
2. Two headaches per month
3. Three headaches per month
4. When interfering with life activities
5. Either 3 headaches per month or when interfering with life activities

Preventative migraine treatment

- When to use
  - 3 or more headaches per month
  - Interference of headache with daily activities
  - Acute medications ineffective, contraindicated, or overused
  - Adverse effects from acute medications
  - Patient preference for prevention
Preventative migraine treatment

- **Herbal options**
  - Magnesium oxide 400 mg daily
    - And PRN headache
  - Petasities (butterbur) - Petadolex
    - “PA free” due hepatotoxicity
  - MIG-99 (feverfew)
  - Diclegis (B6)
    - For pregnancy

Preventative migraine treatments

- **Level A**
  - Valproate
  - Topiramate
  - Metoprolol
  - Propranolol
  - Timolol
  - (Lamotrigine established as ineffective)
Preventative migraine treatments

- Level B
  - Amitriptyline
  - Venlafaxine
  - Atenolol
  - Nadolol

Lifestyle changes/choices

- Migraines are a whole body phenomena
- Things that worsen migraines
  - Smoking
  - Poor sleep
  - Stress
  - Excessive caffeine
  - Unhealthy eating
  - Inadequate hydration
Preventative migraine treatment

- Match side effects with need
- Women of childbearing age on seizure medications should be taking folic acid
- Attempt to wean drugs after 6-12 months of good control
  - Often helps with willingness to start preventative
- Education can go a long way

Rizzoli, Acute and preventative treatment of migraine, AAN Continuum 2012
Chronic migraine

- Headache of any type occurring on 15 or more days per month
- Eight of these need to be migraine headaches
- More than 3 months
- In the absence of medication overuse

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Chronic migraine treatment

- Treat medically as above first
- Onabotulinumtoxin A

A. Corrugator: 5 U each side
B. Procerus: 5 U [one site]
C. Frontalis: 10 U each side
D. Temporalis: 20 U each side
E. Occipitalis: 15 U each side
F. Cervical paraspinal: 10 U each side
G. Trapezius: 15 U each side
Polly

- 23 year old female
- Constant right sided headache
- Annoying most of the time, with episodes of severe pain
- When severe, right eye is “irritated”

- Mother has migraines
- Smokes 1-2 ppd

Next steps

1. Start daily migraine preventative medication
2. MRI brain with and without gadolinium
3. Send her to the eye doctor
4. Lifestyle changes
What type of headache does Polly have?

1. Migraine without aura
2. Chronic tension headache
3. Episodic tension headache
4. Sinus headache
5. Medication overuse (rebound) headache
6. Hemicrania continua

Trigeminal autonomic cephalgias

- Cluster headache
- Paroxysmal hemicranias
- Short-lasting unilateral neuralgiform headache attacks with conjunctival injection and tearing (SUNCT)
- Probably trigeminal autonomic cephalgia
- (Hemicrania continua)

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Trigeminal symptoms

- Both cluster and paroxysmal hemicrania have:
  - ipsilateral conjunctival injection and/or lacrimation
  - ipsilateral nasal congestion and/or rhinorrhea
  - ipsilateral eyelid edema
  - ipsilateral forehead and facial sweating
  - ipsilateral miosis and/or ptosis
- Differentiate the two based on duration, frequency, and response to treatment

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Cluster headache

- 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 trigeminal symptoms
  - A sense of restlessness or agitation
- Attacks have a frequency from one every other day to 8 per day

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Cluster treatment

- Rescue
  - High flow oxygen
  - Triptans

- Preventative
  - Calcium channel blockers
  - Other "migraine" treatments
Paroxysmal hemicrania

- Attacks of severe unilateral orbital, supraorbital or temporal pain lasting 2-30 minutes
- Accompanied by at least one ipsilateral trigeminal finding
- Attacks have a frequency above 5 per day for more than half of the time, although periods with lower frequency may occur
- Respond absolutely to indomethacin

SUNCT

- Attacks of unilateral orbital, supraorbital or temporal stabbing or pulsating pain lasting 5-240 seconds
- Pain is accompanied by ipsilateral conjunctival injection and lacrimation
- Attacks occur with a frequency from 3 to 200 per day
- Difficult to treat
  - Start with anticonvulsant medications
Indomethacin responsive headaches

- Paroxysmal hemicrania
- Hemicranias continua
- Valsalva-induced headache
- Primary stabbing headache (ice pick)

Hemicrania continua

- Headache for >3 months
- All of the following characteristics:
  - unilateral pain without side-shift
  - daily and continuous, without pain-free periods
  - moderate intensity, but with exacerbations of severe pain

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Hemicrania continua

- At least one of the following autonomic features occurs during exacerbations and ipsilateral to the side of pain:
  - conjunctival injection and/or lacrimation
  - nasal congestion and/or rhinorrhea
  - ptosis and/or miosis
- Complete response to therapeutic doses of indomethacin

Indomethacin responsive headaches

- Indomethacin 50 mg three times daily x 6 days as trial
  - Give with PPI
- Migraine treatment can be tried
When to image

- Red flags for secondary headaches
  - First or worst headache
  - Abrupt-onset headache
  - New headache in those < 5 or > 50
  - New headache with cancer, immunosuppression, or pregnancy
When to image

- Red flags for secondary headaches
  - Progression or fundamental change in pattern of headache
  - Headache with syncope or seizure
  - Headache triggered by exertion, Valsalva, or sex
  - Consistently unilateral headache
  - Neurologic symptoms lasting longer than 1 hour
  - Abnormal exam

When to order labs

- New onset headache over age 60
  - ESR and CRP
  - $20-50 each
  - Need to consider giant cell (temporal) arteritis
    - Vision is at stake
Send the patient to the ED!

- Sudden onset severe headache
  - Different from previous headaches
  - Fatigue or sleepiness
  - Slur or focal neurological deficits

Conclusion

- Educate patients for better efficacy of treatment
  - Treat migraines at onset
  - Minimize analgesics
- Adjust rescue medication if not working
- Start preventative medication when needed
- Adjunctive therapies and lifestyle changes really can help
- Image when appropriate
Resources

- http://www.americanheadachesociety.org/assets/1/7/NAP_for_Web_-_Headache_Diagnosis___Testing.pdf

Questions?

Thank you!