Primary Care Perspective on Headache and Neck Pain

Amy Tees, FNP-C, MSN, BSN, RN

Center for Neurosciences
Tucson, AZ
Disclosures:

- **Research**: Medtronic regarding deep brain stimulation
- **Off label discussion**: this talk will include discussion of off label use of medications to treat headache and some possible current clinical trials of medications and devices
Getting a Handle on Headache Management
The Front Line: Primary Care

- the history of present illness
- the family history
- personal history
- the exam-red flags?
- testing? imaging and/or labs
- consult?
- treatment (ugh!)
- follow up-changes?
ICDH III Criteria
International classification of h/a disorders (now in 3nd release 2013)

This gave structure and categorization to headaches and diagnoses

* Part 1 - Primary headaches
* Part 2 - Secondary headaches
* Part 3 - Cranial neuralgias

appendix

***under each type are many subsets and subtypes
Primary Headaches
Most commonly seen in primary care (90% of headache types)

- Migraine
- Tension Type (most common h/a but rarely chief complaint)
- Trigeminal autonomic cephalgias (TACs)
- “Others”
- Mixed Headache, etc.
Secondary Headaches

- Headache d/t infection (sinus, meningitis, zoster, etc.)
- Psychiatric headaches
- Temporal arteritis/Glaucoma
- Carotid dissection/Stroke/Vascular
- High/low intracranial pressure
- Cervical, TMJ, Dental, etc.
- Autoimmune
  - Wolffs headache 8th ed. 2008
Secondary Headaches

- Concussion/TBI
- Neuralgias
- Substance abuse/MOH
- Tumor
- Chiari malformation
- Encephalitis
- Ice cream headaches!!!
  - Wolff's headache 8th ed 2008
Cranial Neuralgias—quick, fleeting, often shock-like episodes caused by inflammation of nerves in upper neck or head

- **TN**—severe facial pain along trigeminal nerve + certain characteristics
- **Occipital**—lancinating pain, + Tinel’s over nerve and decreased sensation on ipsilateral occipital side
Occipital Neuralgia

- Pain over the lesser or greater occipital nerve area unilaterally or bilaterally
- Pain can start at upper neck and radiate upward (eval for C2 issues)
- Can be elevated or worsened by movement of the head/neck
- Tenderness over the occipital nerve
- Pain can be sharp or dull achy

Wolff's Headache 8th ed. 2008
X-RAY EXPOSURE
GIVE ME A DOSE
OH MY POOR HEAD
I CAN'T STAND IT!

FOR HEADACHE
HAS RELIEVED THOUSANDS
WHY NOT YOU?

IT WILL CURE THE WORST KIND OF HEADACHE,
WHETHER CAUSED BY...
Sick Stomach, Excess of
Spirits, or Neuralgia

GIVES RELIEF IN 15 MINUTES
OF KOHLER'S ANTIDOTE

8 Doses Mailed to any address in U.S.
Post paid, on receipt of price.
Migraine: Classic

- Aura (fully reversible) usually visual but can be other types such as sensory, auditory, etc.
- Must have 2 of these: mod to sev pain, pulsating quality, unilateral pain, worse w/activity
- Must have 1 of the assoc sx: photo, sono, nausea/vomiting
  - ICDH 2013 criteria
- Also common: neck pain, cognitive delay
- Lasts 4-72 hours
- ICHD-2 Diagnostic Criteria from IHS 2004
Migraine without Aura

- 2 or more: unilateral, pulsating quality, mod to severe pain, worse with activity
- 1 of the following: nausea and/or vomiting, photophobia, phonophobia
Migraine TX Overview: Based on type (chronic vs episodic)

- Acute Therapies: DHE, Triptans, Nsaids, Anti-emetics, Combos, narcotics
- ***Nsaid +Triptan (occ combine with sedating anti-emetic too)***
- Prophylaxis: Tca’s, SSRIs, CCBs, BBs, AEDs, herbals, Botox (r/o MOH--rebound)
- Adjucntive: Phy therapy, biofeedback, cognitive behavioral therapy, watch for h/a causing meds, watch for comorbid psych issues
R/O Common H/A Triggers

- Diet including dehydration and ETOH
- Lifestyle-sleep hygiene including sleep apnea, etc.
- Allergies
- Stress
- Environmental
- Hormones
- Sensory-ex. Lighting, perfume, glare
Prophylactic Migraine TX

- Herbals - Magnesium 400-600mg qd, Vitamin B2 400mg QD, CoEnzQ10 100mg TID, Boswellia Root 375mg TID, Butterbur root (use cautiously, Petadolex brand name) 100-150mg QD

- TCAs - typically nortriptyline or amitriptyline 10-30mg qhs

- Beta-blocker - usually propranolol 20mg bid titrate up as tolerated
Prophylaxis Migraine Cont’d

- Calcium Channel blockers—mainly verapamil 180-360mg as tolerating (checking EKGs)
- Anti-epileptics—Topiramate 100mg-200mg qhs, Divalproex Sodium 500mg-1000mg, Gabapentin variable doses, off label use of Trokendi ER, zonisamide, possibly levetiracetam
Chronic Migraine

- More than 15 days per month, each more than 4 hr
- No other obvious cause
- Is not currently overusing abortive meds
- More than 8 of the days are migraines
- Has had 5 prior or more previous attacks (with/without aura)
Chronic migraine

- 3.2 million adults have chronic migraine
- 1 in 10 adults with migraine have been misdiagnosed and actually have chronic migraine

Chronic Migraine Hx

- Remember not all days have to be called “migraine” or ranked 8-10/10
- Ask how many headache free days in month?
- Ask how disabling? Even with abortive meds
- Ask how well prophylactic meds are working/side effects?
Medication Overuse Headache

- Can occur when taken more than 10x per month
- Causes long lasting receptor changes
- Can occur with: mixed analgesics, ergots, possibly DHE, probably triptans, NSAIDS, worst with opioids
Onabotulinumtoxin A (Botox)

- Contraindicated with known hypersensivity or muscle weakness (ex. MG)
- Common side effects for migraine use: headache or migraine (9%), facial paresis (2%), ptosis (4%), infection (3%), injection site pain (3%), neck pain/stiffness/weakness/etc (25%) N=687

Botox prescribing info; PREEMPT final report 1 and 2
Expected outcome from Botox

- Patients had 8-9 fewer headache days per month compared with baseline at 24 weeks, therefore a 50% reduction documented on PREEMPT 1 & 2 trials
- Dodick et al on behalf of PREEMPT Chronic Migraine Study Group, Headache 2010 (phase 1) and 2011 (phase 2)
Onabotulinumtoxin A (Botox)

- 7 yr of research between 1997-2007 to establish the injection paradigm
- Paradigm: 155 units variable amounts 31 injections total across 7 areas
- Injections every 91 days

Trigeminal Autonomic Cephalgias

- Definition—severe relatively brief h/a with some prominent autonomic features
- Characterized by pain in a trigeminal nerve distribution (typically V1 region)
- Similar sx but differences in attack duration and frequency
- Treatment varies
Cluster Headache

- men>women, practically any age, cycle (usually 4-8wks), remission (usually 6-12mo)

- **Sx:** Severe orbital or temporal pain lasting 15-180min + 1 or more:
  - ipsilateral conjunctival tearing/injection
  - ipsilateral nasal congestion/rhinorrhea
  - ipsilateral eyelid edema
  - **Restlessness**
  - ipsilateral miosis and/or ptosis

  Cephalgia, 2004
Paroxysmal Hemicrania

- orbital or temporal pain lasting 2-30 min usually 5x per day or more + 1 or more:
- Same sx as cluster except no restless or agitation feelings
- 2 attacks lasting 7-365d, remission more than > 1 mo.
- **completely tx by indomethacin

ICDH-III Cephalagia 2004: 24 (Suppl 1)  
International Headache Society 2003/4
Paroxysmal Hemicrania

- orbital or temporal pain lasting 2-30min usually 5x per day or more + 1 or more:
- Same sx as cluster except no restlessness or feelings of agitation
- 2 attacks lasting 7-365d, remission more than > 1 mo.
- **completely tx by indomethacin

ICDH-3tt Cephalagia 2004: 24 (Suppl 1)  International Headache Society 2003/4
SUNCT - short unilateral neuralgiform h/a with conjunctival injection and tearing

- Neck mov't can trigger pain
- Rare, Men>women
- Ages 10-77 y/o.
- Attacks are usually every 5-6min
- Severe sharp stabbing orbital or temporal pain worst in V1 region
- Pain is brief lasting 5-250 sec
- Attack is 24-30 hr
- Often occurs during daytime

Cohen, Matharu, and Goadsby Brain 2006
Hemicrania Continua Vs. Paroxysmal Hemicrania

- COMPLETELY resolved by INDOMETHACIN
- Can be episodic or chronic
- Must have 1 ipsilateral feature: conjunct redness, lacrimation, nasal congestion, ptosis, miosis, rhiorrhea
- Pt’s are usually agitated or anxious
- Pain is high intensity for PH, moderate usually for HC
- 10 sec to 4hr for PH (2-50x per day), continuous for HC
- Other tx options: celebrex, nsaids, AEDS, ONBs, CCBs, Botox, etc

Wolff’s Headache 8th ed, 2008
The “Others”

- Chairi malformation
- Post concussive h/a or TBI
- MOH
- Post-LP h/a
- Carotidynia
- Exertional h/a (variations: cough, coital, etc)
- Hypnic h/a
- PTC
Secondary Headache: What you don’t want to MISS!

- Obviously do a great H & P.
- Look for Dr. David Dodick’s (at Mayo) SNOOP
- S-systemic sx-fever/wgt loss or secondary risk factors such as hx of HIV/CA
SNOOP continued:

- N-neuro sx or abn sx-such as ataxia, confusion, etc.
- O-onset, sudden, abrupt or split second
- O-New onset with progressive h/a in older pt > age 50yr (giant cell arteritis)
- P-previous h/a-first or new type (change in freq, severity or features)

Danger Signs:

- **Symptoms:** “thunderclap h/a”, change in character, new onset >50yr, “worst h/a”, h/a starts w/ exertion, hx CVA/HIV or immunocompromise
- **Exam:** change in mental status, meningeal sx, focal neuro sx, rash suspicious for spotted fever, meningococcemia
Finding Consideration

- Thunderclap SAH
- Worst h/a SAH, cerebral venous thrombosis
- Pregnancy Eclampsia, cerebral venous thrombosis
- Change in vision Glaucoma, optic neuritis
- Pain with eye mov’t Optic neuritis
- Fever Infection
- Dbl vision Mass, intracranial hyper/hypotension
- Ptosis Carotid artery dissection
FOR ALL HEADACHE
Use Hoffman's Harmless Headache Powders.

They are a Specific.
Contain no Opium,

to cathartic

Price 25 Cents.

For sale by druggists.

OR SENT BY MAIL. ADDRESS THE
HOFFMAN DRUG CO.,
45 Main St., Buffalo, N. Y., and International Bridge, Ont.

HOFFMAN'S HARMLESS HEADACHE POWDERS
CURE ALL HEADACHES.

See that you get the genuine. They have no equal. There is nothing "just as
good," as you are sometimes told by unscrupulous druggists. Price, 25 cents.

SOLD BY B. F. KEESLING, LOGANSポート, IND.
Imaging: or not (CYA)

- In general my answer is yes (so don’t listen to me)
- But: multiple studies have showed poor yield with headache pts
- 605 of 1275 pts imaged (various types)
- 97 were abnormal, 79 had incidental findings, 28 were actually abnormal and all had abn. exam
Neck Pain: So Many Causes

- Stenosis
- “DJD” vs arthritis
- Radicular
- Dystonia or muscular
DJD/Arthritis

- Mild to Moderate neck pain
- Occipital headaches
- Muscle spasms
- “Popping and grinding”
- Possible hyperreflexia, weakness, gait issues, etc.
Radiculopathy—weakness in muscles innervated predominately by fibers from one nerve root

- Sx: radiating pain, numbness, tingling
- C1 innervates the atlanto-occipital joint
- Can be exacerbated by valsalva maneuvers that increase interspinal pressure
- Upper cervical root irritation can cause pain and secondary muscle spasms/headaches

Cervicogenic Headache

- Mild to moderate pain, localized to C2 then spreads
- Pain starts in neck and works upward
- Men > women slightly
- Hx of chronic headaches
- Often associated with whiplash injury
Cervical Dystonia

- “Spasmodic torticollis” or “wry neck”
- Focal dystonia or severe muscle spasms of the neck often causing twisting, tilting, turning or shifting of the neck position
- Causes pain and secondary symptoms
- Usually starts between ages 20-60 years
- Occurs more often in women
  - Wolff’s Headache, 8th ed 2008
Cervical Dystonia

- Severe prolonged muscle spasms and tenderness
- Possible muscle hypertrophy
- Decreased ROM
- Shoulder elevation/Poor posture
- Forward flexed posture (finger breaths?)
- Possible tremor/possible sensory sx in UEs
Case Presentations #1

- 25 yr old with classic migraine, started age 17 with progressively worse now 3x per wk each lasting 24-48 hr, 10/10
- Failed topiramate d/t cognitive delay but it helped. BP runs 100s/60s. Not on birth control. Failed TCAs d/t sedation. PMHx: negative.
- MRI: negative, Exam: negative
- Options: acute and prevention: BB, CCB, anticonvulsants, SSRI, BTX, herbals, e
Case # 2

- 56 yr. Male with unilateral supraorbital severe pulsating pain lasting about 2 min occurring 50x per day w/ mild nausea, ipsilateral conjunct, injection & lacrimation
- MRI/MRA negative
- Exam all normal
- Options: indometh just in case? Steroids?? Lamotrigine, Carbamazepine, Gabapentin?
Case # 3

- 44yr female 5’4, 285 lbs  10yr + hx low grand global pressure h/a prog. worse
- “band of pressure” with visual sx but no aura, describes decreased periph vision and “blackening of vision”
- Exam-ok, except slightly elevated BP and no venous pulsations, slight papilledema
- MRI-normal except empty sella
Case #4

- 66yr old female new onset global 7/10 h/a with mild photo/sono, no other features. Always starts 2-3hr after going to sleep
- Exam all normal
- MRI all normal
- Tried triptans at onset minimal effectiveness. Tried TCA for prevention no better
- DX?
Case #5

- 70 yr old male with 6 yr progressive hx of occipital pain bilat, no assoc. Sx, no radic sx. Does c/o occ neck pain which can trigger h/a.
- H/a is worse laying down and moving head in certain positions
- Exam: bilat occipit tenderness, severe neck muscle spasms, head held in tight posture with occ. head tremor
Headache Prophylaxis