


HEADACHE

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Goal: Discuss management of severe headache in the emergency room.

One of the most common chief complaints in the ER.

Treat the pain!

Make sure it is nothing serious.

Primary Headaches

Tension

Cluster

Migraine

Just recognize as primary!

Secondary Headache

Tumor

Meningitis

Subarachnoid

Temporal arteritis

Pseudotumor cerebri

...

TENSION HEADACHES

Most common headache.

More often in men.

Usually have underlying stressful event – change in sleep.

MIGRAINE

Usually have an aura.

May have colored lights.

Photophobia.

May cause neurological deficits – hemiplegic migraine

Don't fall into the trap!

Why do we care if it is classic vs. migraine?

Does it matter?

Aura advantage = prophylactic (triptan) meds!

CLUSTER

Cyclical schedule

Intense headaches

Centered behind one eye

Often cannot sit still

May have neurological findings – miosis, facial sweating, ptosis.

Give oxygen!

RED FLAGS

New onset headache

Hard neurological symptoms

Sudden in onset

Thunderclap presentation

Headache with fever

Headache in patient who is immunocompromised

Trauma



**HARD NEUROLOGICAL
SIGNS** It's a stroke until
proven otherwise!

TREAT THE PAIN!

HOW?

MEDICATIONS

Narcotics

NSAIDs

Triptans

Ergotamine

Steroids

Dopamine antagonist

Antiemetics

NSAIDS – convenient first-line therapy

Triptans – migraine specific drugs that bind to serotonergic receptors; can be effective in the *early* stages

Antiemetics – should be considered a primary agent in the treatment of migraine

Dopamine antagonist – Metoclopramide has been shown to be more effective than sumatriptan in ED treatment of HA

Dexamethaxone – used to prevent recurrence of headache

Ergotamines – migraine-specific drugs that bind to serotonergic receptors similar to triptans

Narcotics – it is acceptable to use in headaches resistant to other therapies, but be careful!

2013 study from University of Alberta Dr. E Taggart

Systemic Review: Ketorolac in the treatment of acute migraine.

Ketorolac results in similar pain relief, and is less potentially addictive than meperidine and more effective than sumatriptan; however, it may not be as effective as metoclopramide.

WHAT ABOUT VALPROIC ACID?

Study has provided Class 1 evidence that in ED patients with acute migraine, IV valproate is inferior to metoclopramide or ketorolac in improving headache outcomes.

- double blind comparative efficacy trial**
- primary outcome = improvement of HA by 1 hour**

NARCOTICS

Treatment of acute migraine headache with narcotics is potentially ineffective and may lead to abuse.

In spite of recommendations, opioids are still used in more than half of all emergency department visits for migraine.

NSAID

Ketoralac (Toradol) 30mg IV
60mg IM

DOPAMINE ANTAGONISTS

Prochlorperazine (Compazine) 10-20mg IV

Metoclopramide (Reglan) 10-20mg IV

Benadryl 25-50mg IV to prevent dystonia/akathisia

Consider Dexamethasone 10mg IV if status migrainosis

WHAT'S UP WITH STEROIDS?

Large meta-analysis study done in 2008 by University of Alberta, Dr. I. Colman showed that when dexamethasone is added to standard abortive therapy for migraine headache, single dose dexamethasone is associated with a 26% relative reduction in headache recurrence (number to treat=9) within 72 hours.

Large randomized, double-blind, placebo-controlled study done by Dr. A. Singh Department of Emergency Medicine Oakland, CA showed dexamethasone is efficacious in preventing headache recurrence and safe when added to standard treatment for management of acute migraine HA in ED.

THINGS TO CONSIDER REGARDING TREATMENT

Don't discount NSAIDS

History of QT prolongation

Hydration!

***Contraindications to DHE – breastfeeding, hypertension,
heart disease, peripheral vascular disease**

CONCERN OF VASOSPASM

NSAIDS – give toradol unless allergy or renal insufficiency

Triptans – consider if in the *early* stages of HA and if patient has a triptan prescribed

Antiemetics – give zofran unless contraindicated

Dopamine antagonist – give reglan or compazine and consider benadryl; consider redosing in 30-60 minutes

Dexamethaxone – do not give if patient diabetic or concern for infection

Ergotamines – shown to be less effective than sumatriptan and dopamine antagonist; don't forget about contraindications!

Narcotics – last resort.

You cannot make a diagnosis judging on how they respond to your therapy!

CASES TO CONSIDER

Older female who presents with headache.

Pain is over temporal region bilaterally. + jaw claudication

What needs to be included in your differential diagnosis?

GIANT CELL ARTERITIS

Start steroids!

Prednisone 60mg daily!

Set up outpatient biopsy.

Steroids won't change biopsy results.

Prevent vision loss!

Check ESR and CRP.

PREGNANCY POPULATION

Dural venous thrombosis – due to hypercoaguable state

- symptoms slowly get worse with time**
- might be drowsy**

MRV!

Preeclampsia – you have to think about it!

NOT OUT OF THE WOODS AFTER DELIVERY!

BRAIN TUMOR

Progressive nature

Worse in the morning

Consider scheduling imaging as an outpatient.

CARBON MONOXIDE

Anyone else in your living environment with the same symptoms?

Diagnosis is made on suspicion!

OXYGEN OXYGEN OXGYEN

Hyperbaric oxygen! Need to know hgbCO level!

GLAUCOMA

Pupil doesn't react!

Eye is red.

DON'T FORGET TO LOOK AT THE EYE!

CEREBELLAR STROKE

Classic headache with dizziness and ataxia

Patient presents with headache –

38 year old female who complains of headache.

What do you want to know?

Are they neurologically intact?

Do they have a fever?

Do they have neck stiffness?

Any history of trauma?

Was the pain maximum in intensity when symptoms first started or did pain gradually get worse?

Do they have history of headaches?

Is the patient immunocompromised?

RED FLAGS

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MAKE A TREATMENT PLAN

What do you want to order to treat this patient?

NSAIDS – 30mg IV toradol

**Dopamine antagonist – reglan (or compazine) 10-20mg IV
along with 25-50mg IV benadryl; consider redosing in 30-60
minutes**

+/- Dexamethaxone – 10mg IV

“Migraine is one of the most frequent disabling neurological conditions with a major impact on the patients’ quality of life.”

**-- Dr. S. Evers, Department of Neurology,
Munster, Germany**

Thank you!

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