

Chronic Neurological Problems



Migraines
Headaches
Seizures

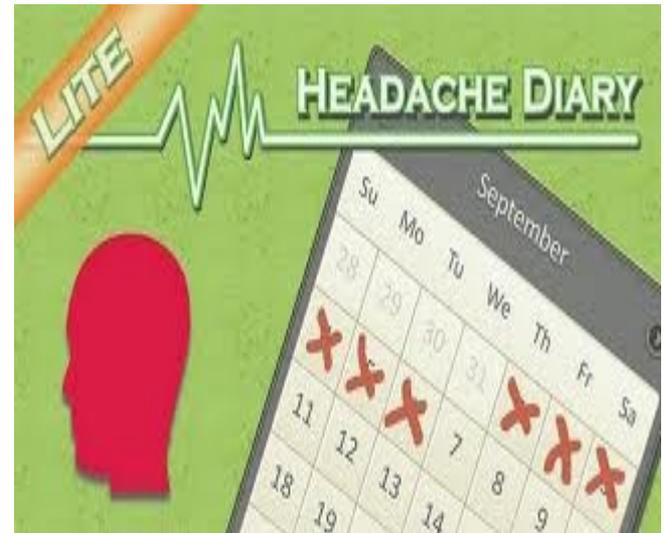
Headache Classifications

- Functional/Primary
 - Headache is the primary problem

- Organic/Secondary
 - Results from a medical condition, symptom of another process (CVA), sinus infection, tumor etc.

Diagnosis

- ❑ History and Physical
 - Characteristics
 - ❑ Onset, Severity
 - ❑ Frequency, Duration
 - ❑ Aggravating factors
 - ❑ ADLs
 - ❑ Associated symptoms
 - ❑ Precipitating factors
 - ❑ Any family history?
 - ❑ Headache diary?



Diagnosis continued...

□ EMG

- Muscle tension of the neck, scalp, face (tension and migraines)

□ Lab studies to r/o other causes

□ Special Studies

- CT, MRI, LP
- To rule out organic causes like tumors, aneurysms, infection for severe/constant HA

Alternative Treatment Options

- Biofeedback
 - Patient can learn to control bodily processes to help with pain
- Non-Pharm Treatments
 - Massage, Acupuncture, Herbs
 - PT, Hypnosis, LifeStyle Changes
- Comfort Measures
 - Cold Compresses, Dark/Quiet room, rest etc..

Tension-Type Headache

- ❑ Cause: unknown
- ❑ Most common type
- ❑ Occur intermittently
- ❑ Can last mins- days
- ❑ Manifest
 - Bilateral pain
 - Frontal/occipital & neck
 - Pressure, tightness
 - Photosensitivity
 - Phonosensitivity
 - Stiffness, Tenderness to neck



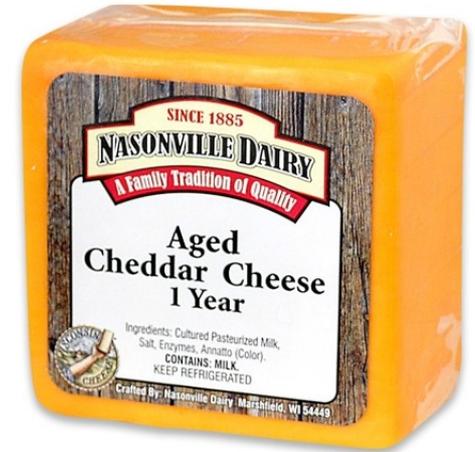
Medication Treatments: Tension HA

- Mild to Moderate- Abortive (Nonnarcotic)
 - Aspirin, acetaminophen, NSAIDS
- Severe- Abortive plus muscle relaxers
- Preventative- (Antidepressants, antiseizure drugs)
 - Amitriptyline, nortriptyline, topiramate

Migraines

- Women more common
- Unilateral throbbing pain
- Cause
 - Research variety of factors
- Patho
 - Neurovascular events happen:
 - Vessel dilation, constriction, spasm
 - Hyper excitable neurons in the cerebral cortex
 - Was there a trigger??

Migraine Triggers



Migraine Aura & Migraine Phases

Aura- sensation that precedes headache

1st phase of Migraine- Aura or odd feeling

2nd phase- Headache begins- patient seeks quiet, dark, hibernation like environment

3rd phase- Headache terminates, soreness and exhaustion may continue

Medical Management

□ Abortive

- ASAP
- Mild
 - OTC
 - Caffeine containing analgesics
- Severe
 - Triptans
 - Sumatriptan
 - causes vasoconstriction

□ Prophylactic

- Take Daily
- Beta Blockers
- CCB
 - Monitor BP for changes
- Anti Epileptics:
 - topiramate
- Antidepressants
 - Tricyclics & SSRI
- Botox

Cluster Headaches

- Rare, more common men
- Severe form of a headache
- Patho-Unknown
- ? Hypothalamus dysfunction ?
- Manifestations:
 - Clusters of headaches
 - Pain in/around eye or head
 - unilateral, severe!!!
 - pulsing pain
 - ipsilateral tearing
 - rhinorrhea
 - facial flushing/pallor
 - Miosis (constricted pupil)
 - periorbital edema
- Diagnosed by symptoms
- Triggers

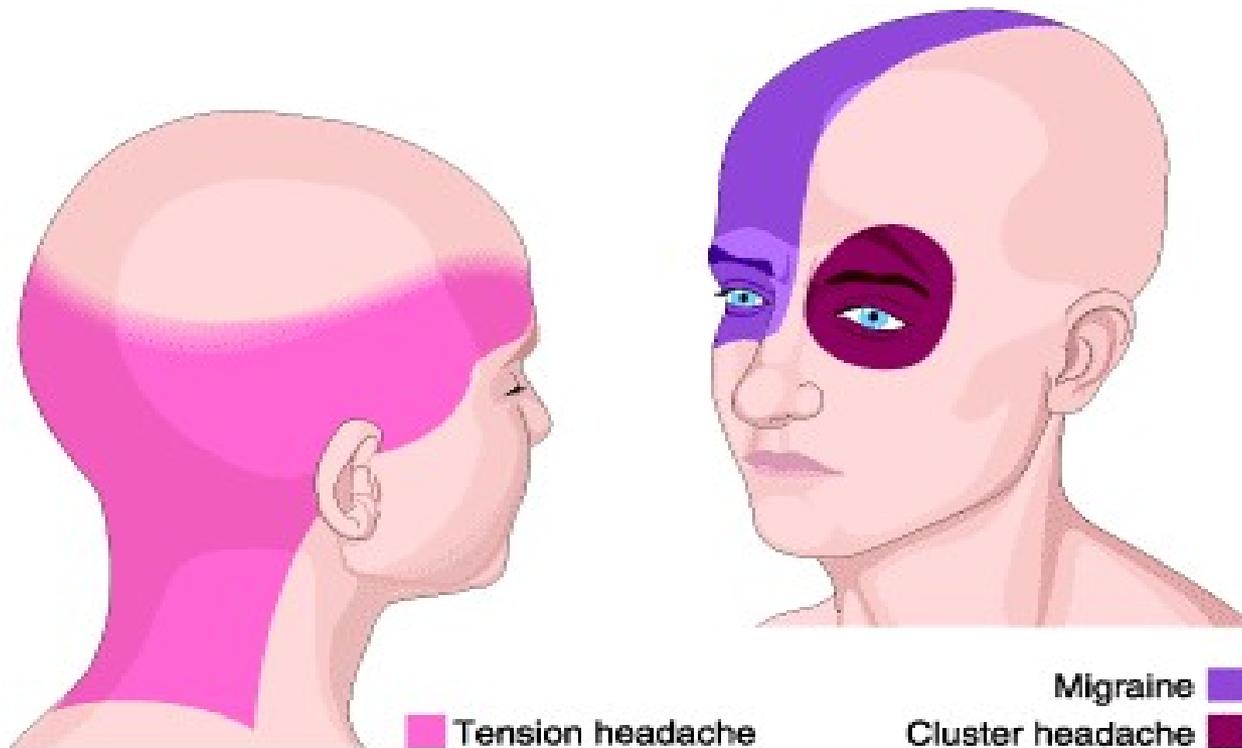


Cluster headaches may involve pain around one eye, along with drooping of the lid, tearing and congestion on the same side as the pain

Treatment

- Prophylactic (GOAL is to PREVENT)
 - CCB (verapamil), Corticosteroids (prednisone)
- Abortive
 - O2 high flow 100% by nonrebreather
 - Triptans are the standard of treatment
- Nerve Blocks for bad cases
- Ablation or deep brain stimulation in rare cases

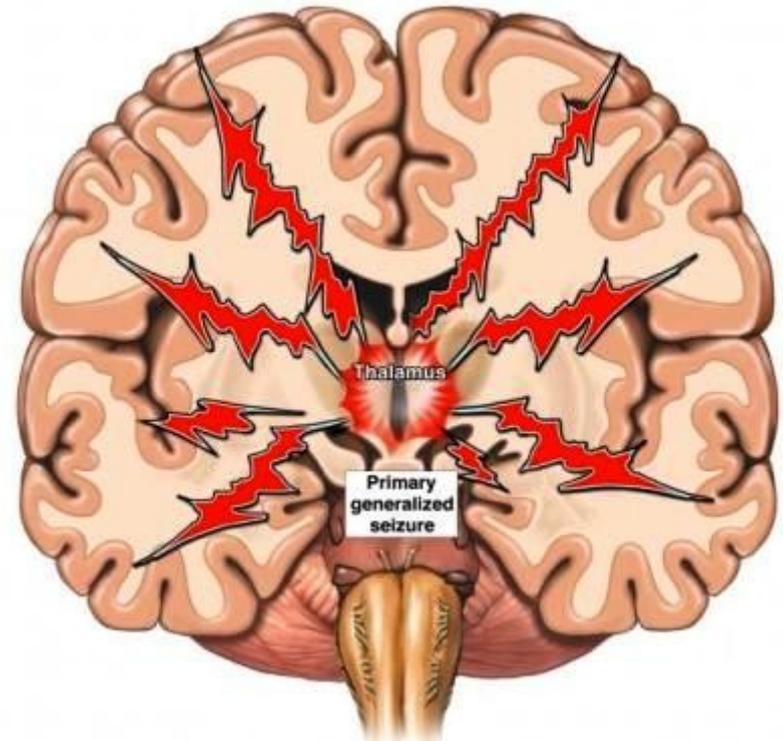
Locations of pain differ...



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Seizure Disorders

- ❑ Sudden uncontrolled electrical discharge of neurons that interrupt normal function
- ❑ May be a symptom of another medical condition
- ❑ Spontaneously (75% idiopathic)
- ❑ Seizure- 1 isolated occurrence
- ❑ Epilepsy: 2 or more unprovoked seizures



Diagnostics

- Witnessed shaking? Description of what happened may be all you need
- History
 - Head trauma, illness, birth injury, developmental history, medications, drugs, description of the event
- EEG-not definitive
- Imaging: structural abnormalities?
- Labs: metabolic abnormalities?

Phases of Seizures & Classification

- Aural Phase- Warning it may be coming
- Ictal Phase- having the seizure now
- Post Ictal Phase- recovery
 - CLASSIFICATIONS: Generalized or Partial (FOCAL)
 - Generalized- both sides of brain
 - Focal- one side of brain

Generalized: Tonic Clonic Seizures

- Most common “grand mal”
- + LOC
- Body becomes stiff, then jerks
- Can have cyanosis, bite tongue, drool and even have incontinence
- Will be post ictal
- No memory of the seizure

Generalized: Tonic Seizure

- ❑ Sudden onset increased muscle tone
- ❑ Usually remains conscious-short duration
- ❑ Often occur when sleeping
- ❑ Can basically stiffen up for short period, return to normal

Generalized: Clonic Seizure

- + LOC
- Sudden loss of muscle tone
- Limb jerking after loss of tone
- Could be asymmetric or symmetric limb jerking

Generalized: Absence Seizures

- Usually seen in childhood
- Daydreaming seizures (petit mal)
- Brief daydreaming that can occur often or daily
- May look like staring with eye blinking or lip movements lasting 10 seconds or less

Generalized: Myoclonic Seizures

- Lasts a few seconds only
- Patient is awake usually
- Sudden, excessive jerk or twitch of the muscle or muscles

Generalized: Atonic Seizures

- ❑ Drop attack
- ❑ Loss of muscle tone and patient drops to ground
- ❑ Short duration, usually no LOC

Focal: Focal Seizures

- Can be (Simple Partial) Focal Awareness Seizures or (Complex Partial) Focal Impaired Awareness Seizures
- Involving one side of brain
- Seen more often in adults
- Partial can progress into complex

Simple Partial Seizures (Focal Awareness)

- Remains conscious and alert
- Has unusual feelings or sensations
- Happy/Sad/Joyful or Anger
- Sensory Hallucinations, Olfactory/Touch etc...

Complex Partial Seizure (Focal Awareness Impaired)

- +LOC
- Like a dreamlike experience- alteration in awareness
- Eyes open but can't communicate or interact
- Strange behaviors like automatisms (lip smacking)

Medications for Seizures

- Anti-epileptics. Antiseizure
 - Do not cure
 - Many options phenytoin, carbamazepine...

- Side Effects
 - Because side effects are common medication compliance can be decreased

- Nursing Implications
 - Take at the same time each day
 - Do not abruptly discontinue usage

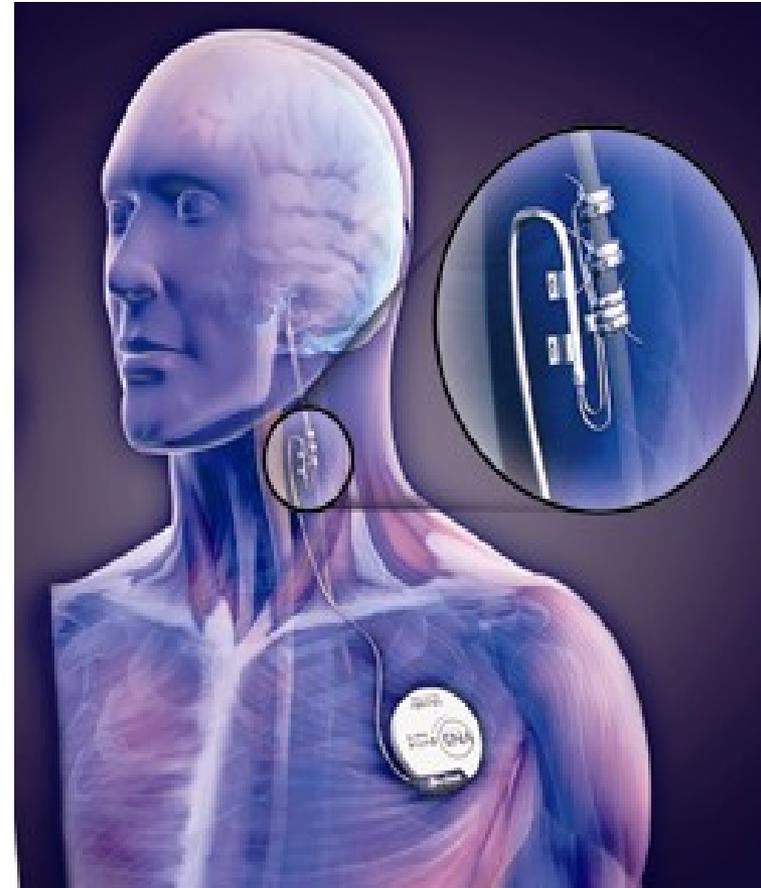
Other Management

- Surgery
 - Remove epileptic focal area in a Surgical resection

- Vagal Nerve Stimulation
 - Electrode wrapped around vagus nerve

 - Various strengths and frequencies interrupt abnormal firing

 - Patient given magnet to activate PRN seizure



Complications

□ Status Epilepticus

- Continuous state of seizure without return to consciousness
- Medical Emergency-brain damage can result
- Treatment
 - AIRWAY
 - IV ACCESS- give Lorazepam or Diazepam

Risk and Impact

- Injury
 - Dependent on activity at time of seizure

- Psychosocial
 - Lifestyle

 - Social stigma-employment, education

 - Driving-vary by state

Nursing Care

- Protect from injury
- Seizure precautions
- Education
- Resources

