

# HEADACHES IN CHILDREN AND ADOLESCENTS

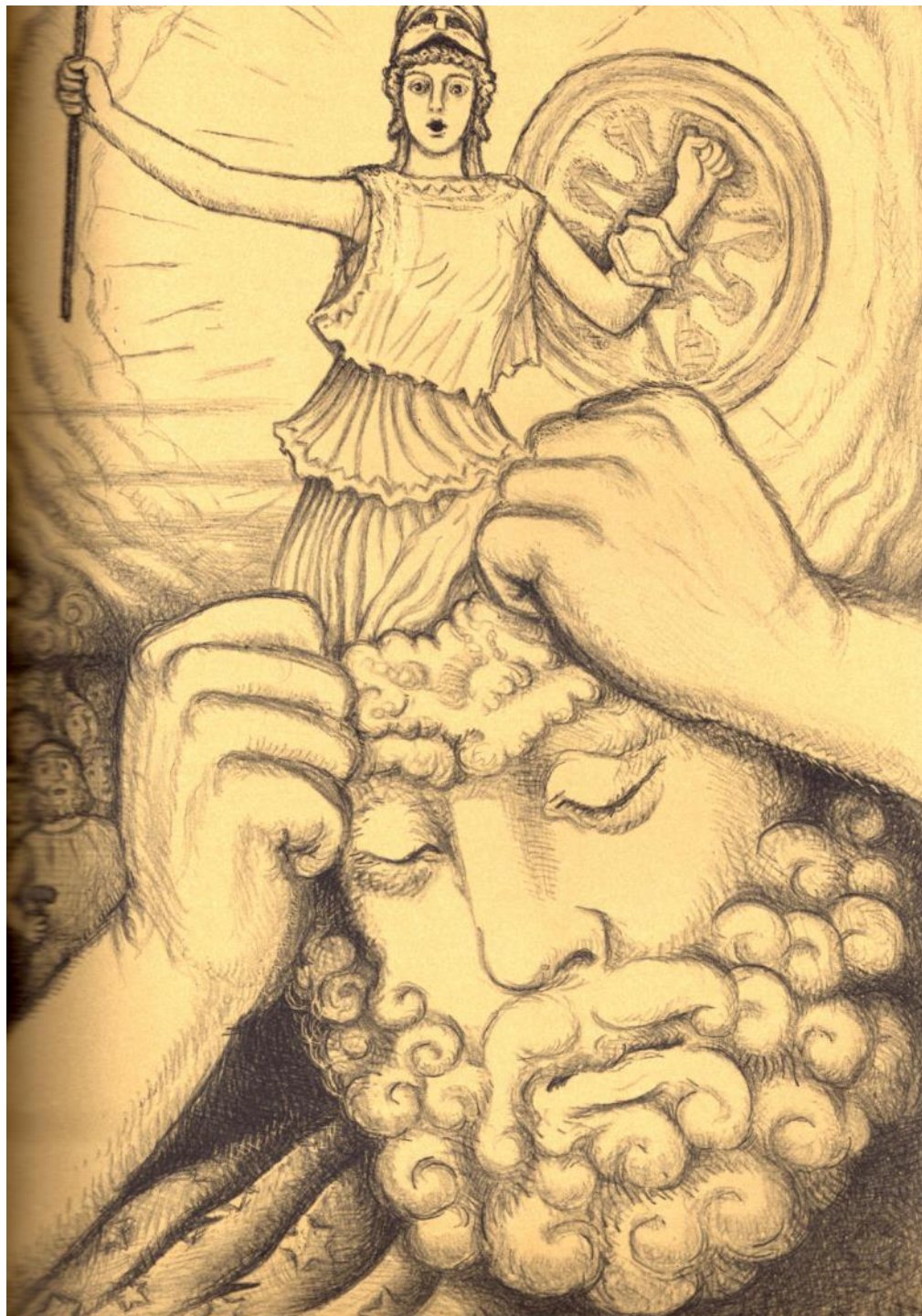
Brian D. Ryals, M.D.







Enthalten bei Athena's Geburt, Vasenmalerei (nach Gerhard), Journ. Voyag. I, S. 41.



# Frequency and Type of Headaches in Schoolchildren

- 8993 children age 7-15 in Sweden
- Migraine in 4%
- Frequent Nonmigrainous in 7%
- Infrequent Nonmigrainous in 48%
- No headaches in 42%

# HEADACHE CLASSIFICATION

## PRIMARY

Migraine

Tension type

Cluster

Indomethacin responsive

## SECONDARY

- Malformation
- Infection
- Toxin
- Trauma
- Neoplasm
- Vascular

# MEDICAL EVALUATION

- HISTORY
- Examination general and neurologic
- Differential diagnosis
- Neuroimaging and lab tests
- Treatment and follow-up



# HISTORY

- When did they start?
- How often do they occur?
- Location and nature of pain?
- How long does it usually last?
- Can you think of anything that causes the headache?
- What has made it better in the past?
- Does anyone else in your family have headaches?



# Do you have these symptoms?

- Nausea
- Vomiting
- Sensitivity to lights, sounds, or smells
- Visual changes
- Fever
- Sore throat
- Stiff neck

# WARNING SIGNALS!!

- First severe headache
- Worst headache ever
- Fever
- Stiff neck
- Double vision, trouble walking, slurred speech
- Headache as soon as awakens
- Progressively worsening headache
- History of head or neck trauma

# Differential Diagnosis

- Intermittent headache with nausea, vomiting, sensitivity to light think migraine
- Intermittent headache without above features think tension headache
- Daily headache without features think chronic tension type, but if worrisome features or progression think organic

# Chronic Daily headache

- Daily or near daily headache
- Non-progressive
- Present for 3 months or longer
- At least 15 days per month
- More than 4 hours per day
- Secondary etiologies have been excluded



# Varieties of Chronic Daily Headache

- Transformed migraine
- Chronic Tension Type
- New onset daily persistent headache
- Hemicrania continua
- Psychogenic
- Medication overuse

# Chronic Tension Type

- Jon is a 14 year old who attends a private school and complains of daily headache, worse in afternoon, he has no N/V, or photophobia. He takes Advil every day.
- He plays video games and sports every day and says he forgets about his headaches when active
- He has failed multiple daily med and had a normal MRI

# Transformed Migraine

- Lauren is a 16 year old female who has a 3 year hx of migraines She has 3-4 severe events per month. Over the past 6 months she has began to have frequent dull steady headaches that are not as severe in addition to her migraines. She is in honors classes, volunteers at the hospital, and a cheerleader. She is stressed and only sleeping 5-6 hours per night. She is missing a lot of school this term.

# NDPH

- Jamie is a 15 year old female who never had headaches until last Spring when she developed a severe headache with a viral illness. She has had a headache everyday since that time. There have been no stressor except her headache. She has had normal CT, MRI, LP, and lab evaluation. She has failed multiple daily meds, triptans, biofeedback, DHE-45, and Botox



# Chronic Daily Headaches Epidemiology

- Adults – 4%
- Children/Teens – 1%
- Pediatric headache clinic – 30-50%

# CDH Co-Morbidities

- School absences
- Medication overuse
- Decreased academic achievement
- Poor social functioning
- Obesity
- Primary or secondary family stress

# Medication overuse

- 3 or more doses per week for over 6 weeks
- Leads to rebound headaches
- Leads to transformed migraine
- Females > males
- Teens > young children
- Psychosocial issues common
- May lead to medical complications

# Acute headaches that are not recurrent

- Systemic illness
- Fever
- Otitis
- Strep throat
- Sinusitis
- Trauma
- Hypertension
- Substance abuse



# Patient management

- Thorough evaluation by physician
- Education
- Get instructions from physician so that meds can be given at school
- Keep headache calender
- Encourage lifestyle management
- Goal is to give treatment ASAP and return child to class attendance is a MUST!

# Impact of childhood headache

- Missed school
- Missed work
- Missed activities
- Affects social relationships
- Impacts self esteem

# Common misconceptions

- Brain tumor
- Behavior problem or school avoidance
- Vision problem
- Allergies
- Sinus disease

# PHYSICIAN'S JOB

- Establish diagnosis and convey to family
- Education
- Establish realistic expectations
- Encourage patient/child to participate in own management

# Reassurance

- You do not have a brain tumor
- You do not have anything to suggest a progressive or life threatening disorder
- Your exam is normal
- Your MRI does not show any abnormalities
- We will work with you and your family to make your symptoms better.

# NONPHARMACOLOGIC INTERVENTIONS

- REGULAR SLEEP
- REGULAR MEALS
- REGULAR EXERCISE
- STRESS MANAGEMENT
- BIOFEEDBACK
- COUNSELING
- PHYSICAL THERAPY, MASSAGE
- BACKPACKS







# ACUTE TREATMENT

- TREAT ASAP
- ATTEMPT TO RETURN TO CLASS
- EDUCATE STUDENT AND TEACHER OF NEED TO INITIATE TREATMENT ASAP
- PLACEBO IS VERY EFFECTIVE
- OTC IBUPROFEN 10MG/KG/DOSE
- OTC ACETAMINOPHEN 15MG/KG/DOSE

# MIGRAINE ACUTE TREATMENT

Dark quiet place

Acetaminophen or ibuprofen

Triptans

Ketorolac

Ergots

Antiemetic

Avoid narcotics

# ACUTE ER TREATMENT

- Quickly place in dark quiet room
- IV fluids
- Consider pregnancy test
- Ondansetron 4mg IV
- Ketorolac .5mg/kg max 30mg IV
- DHE-45 0.1mg age 6-9, 0.25 mg age 10-12, and 0.4mg age 13 and above

# Rescue meds

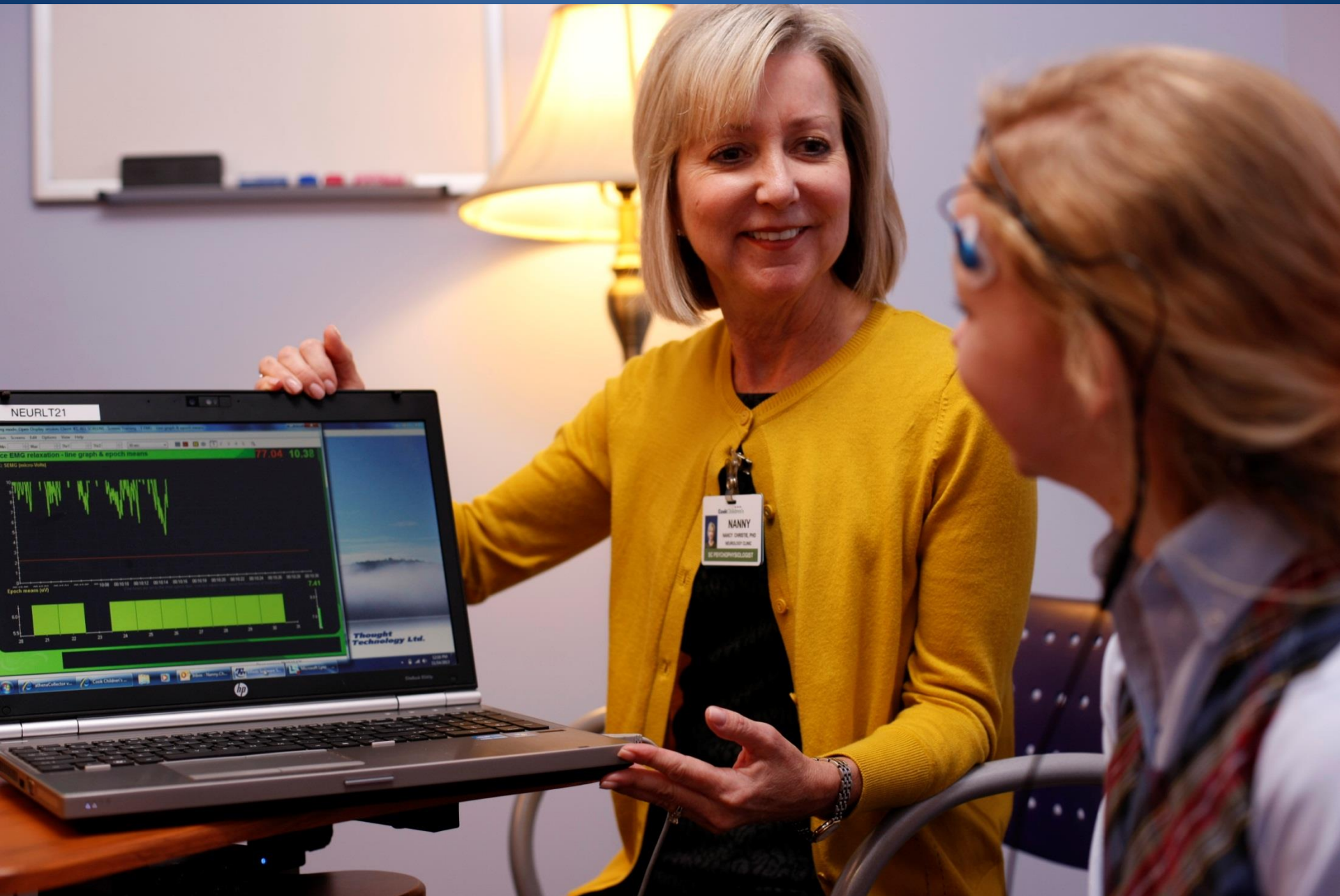
- Zyprexa 5 mg
- Benadryl 25-50 mg
- Go to bed
- Call us in the morning

# WHO NEEDS PREVENTIVE THERAPIES?

- EVERYONE LIFESTYLE AND HYGIENE
- Frequent attacks
- Disabling attacks
- Intolerance for acute medications
- Patient preference

# PREVENTIVE THERAPIES

- CYPROHEPTADINE
- TRICYCLIC ANTIDEPRESSANTS
- BETA BLOCKERS
- ANTICONVULSANTS
- BIOFEEDBACK
- BOTOX





# OTHER PREVENTIVES

- FEVERFEW
- BUTTERBURR
- MAGNESIUM
- RIBOFLAVIN



# CONCLUSIONS

- HEADACHE IS A VERY COMMON DISORDER IN CHILDREN
- USUALLY IT IS NOT A SYMPTOM OF A LIFE THREATENING DISORDER
- IT CAN LEAD TO MISSED SCHOOL DAYS AND OTHER DISABLING CONSEQUENCES
- PEDIATRIC HEADACHE PATIENTS DESERVE EFFECTIVE TREATMENT

# CONCLUSIONS CONTINUED

- Many headaches respond to simple treatment measures such as rest, relaxation, and simple analgesics
- Placebo has been found quite helpful for some children we should encourage this effect in clinical treatment



