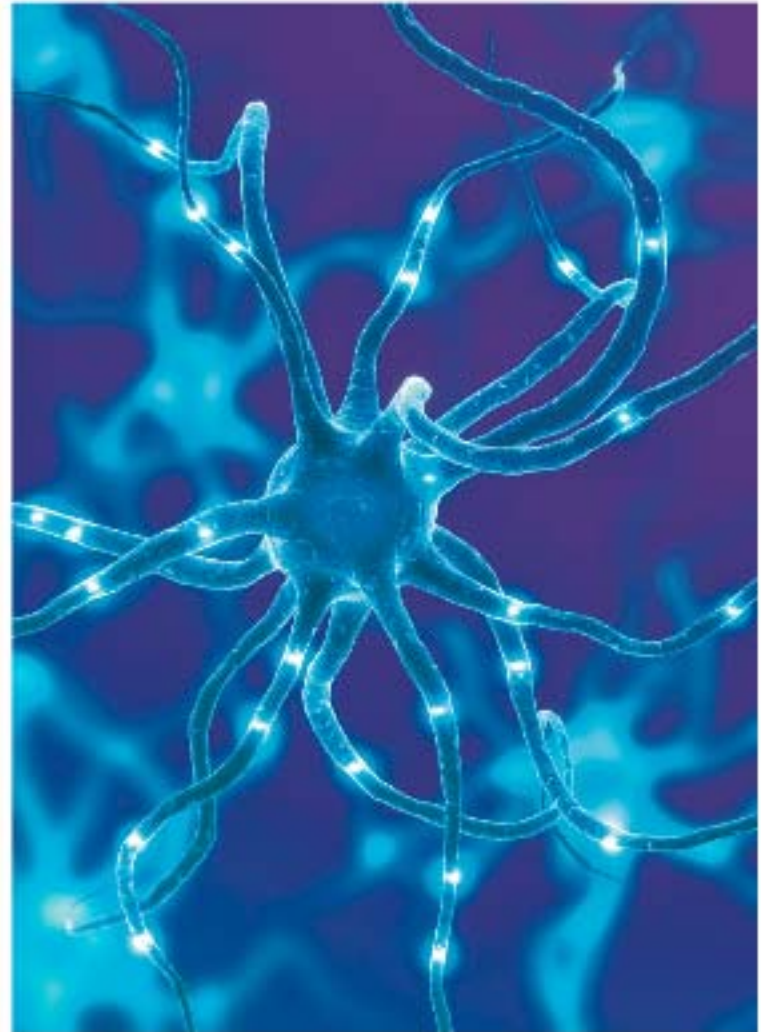


American Headache Society
Headache Curriculum

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Unusual Migraine in Children



Learning Objectives

At the conclusion of this case, participants should be able to:

- Recognize abdominal migraine and distinguish it from other headache disorders
- Counsel women on menstrually related migraine



Clinical Presentation

- SP is a 16-year-old adolescent woman with disabling moderate-to-severe headaches on 1-2 days/week
- Recalls
 - Mild-to-moderate headaches since grade school
 - Episodes of abdominal pain with nausea that were more disabling than her headaches (occasionally missed school)
 - Associated with menstrual cycle
- Headaches are
 - Bilateral
 - Throbbing
 - Localized over the forehead
 - Long lasting (12-36 hours)
 - Associated with nausea and sensitivity to light and sound



Medical History

- **Medical history**
 - Gastroesophageal reflux
 - NKDA
 - Tobacco: None
 - ETOH: None
- **Medications**
 - Naproxen sodium prn, no more than four 220 mg tablets per day, at most 12 tablets per week
 - Famotidine 10 mg for GI symptoms and over-the-counter antacid medications
 - Oral contraceptives
- **Family history**
 - Father has self-diagnosed “sinus” headache (no purulent discharge)
 - Older sister has confirmed diagnosis of migraine



Review of Systems

- Denies any recent infections or illness
- No recent or remote history of head trauma
- No SOB, dyspnea, dizziness, or syncope
- Positive for abdominal pain a few times a month
- At time of visit denies pain, vomiting, diarrhea, or constipation
- Denies hematuria
- Menstrual periods are not regular
- Denies focal motor weakness or loss of sensation
- Describes her current mood as “bummed out about the headaches” but denies other symptoms of depression
- Not sexually active



Physical Exam

- Vital signs: Ht = 66"; Wt = 135 lb; BMI =18; BP = 110/60; P=70; afebrile; current pain rating 2/10.
- **General:** Alert female in NAD
- **Head/Neck:** Normal vision bilaterally. Funduscopic examination shows no abnormalities. Good range of motion of the neck with some generalized muscle tenderness. Thyroid normal to palpation; no lymphadenopathy
- **Heart:** Regular rate and rhythm; no murmurs auscultated
- **Lungs:** Clear to auscultation
- **Abdomen:** Soft non-tender; no organomegaly
- **Neuro:** Cranial nerves are intact, no focal deficits, Romberg test negative, gait normal, reflexes 2+throughout.



Question 1: Which of the following is a likely diagnosis for this patient?

You may choose more than one, as appropriate

- Tension-type headache
- Migraine with aura
- Migraine without aura
- Cluster headache



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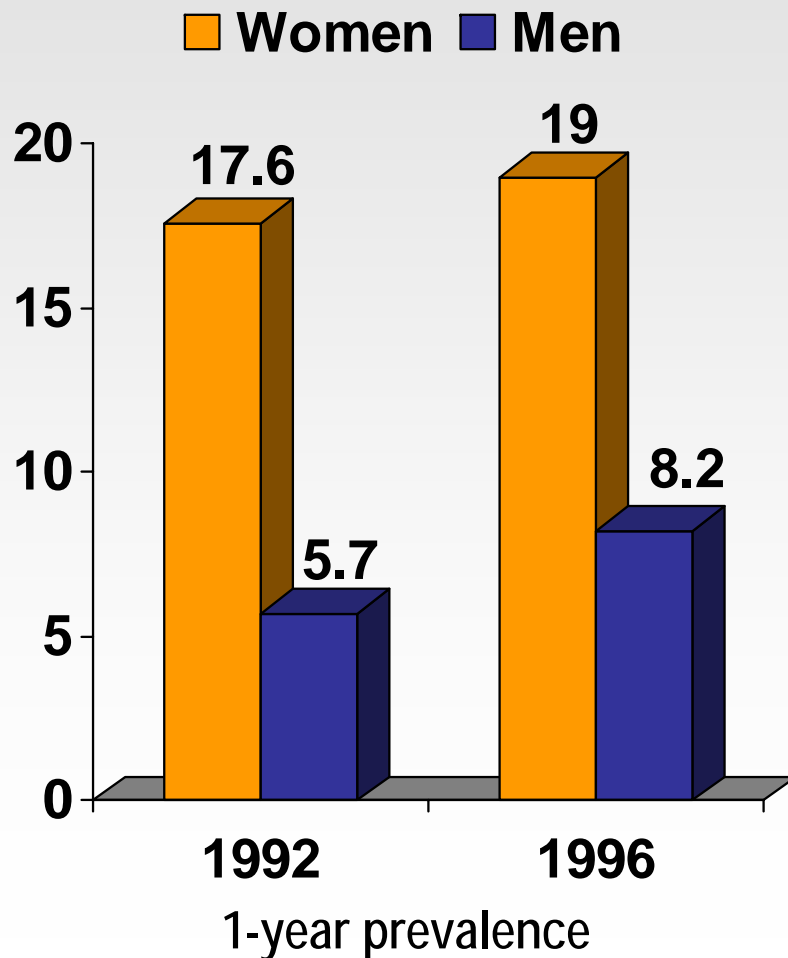


Diagnostic Criteria for Migraine without Aura

- A. Recurrent attacks (at least 5) fulfilling criteria B-D below
- B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)
- C. Headache has at least two of the following characteristics:
 - 1. unilateral location
 - 2. pulsating quality
 - 3. moderate or severe pain intensity
 - 4. aggravation by or causing avoidance of routine physical activity (eg, walking or climbing stairs)
- D. During headache at least one of the following:
 - 1. nausea and/or vomiting
 - 2. photophobia and phonophobia
- E. Not attributed to another disorder



How many women have migraine?



- 1-year prevalence rates of men and women in the United States.
- Migraine is ~ 2 to 3 times more common in women than men

Stewart WF, et al. *Neurology*. 1996;47:52-59.
Stewart WF, et al. *JAMA*. 1992;267:64-67.



Question 2: Which of the following would be useful in the further evaluation of this patient?

- Additional history about her abdominal symptoms
- MRI
- CBC and laboratory tests
- Lumbar puncture



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Results from Diagnostic Evaluation

- SP experiences occasional vomiting associated with headaches
- 3-4 episodes of abdominal discomfort per month; each episode lasting between 1h to 3 days
 - Pain as dull, moderate or severe in intensity, and poorly localized to the periumbilical region
 - No evidence of gastrointestinal disease following upper and lower GI examinations
 - Pediatrician prescribed H-2 antagonists and antacids
- Headaches occur during or shortly after abdominal episode
- About once/mo she leaves school due to abdominal pain and headache



Question 3: Which of the following do you now think is the likely diagnoses for this patient?

- Muscle contraction headache
- Abdominal migraine
- Migraine without aura
- Medication overuse headache



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Migraine Variant Present in Childhood— Abdominal Migraine

“An idiopathic recurrent disorder seen mainly in children and characterized by episodic midline abdominal pain manifesting in attacks lasting 1-72 hours with normality between episodes. The pain is of moderate to severe intensity and associated with vasomotor symptoms, nausea and vomiting.”



Other Migraine Variants in Children: Cyclical Vomiting Syndrome

“Recurrent episodic attacks, usually stereotypical in the individual patient, of vomiting and intense nausea. Attacks are associated with pallor and lethargy. There is complete resolution of symptoms between attacks.”



Other Migraine Variants in Children: Benign Paroxysmal Vertigo

“This probably heterogeneous disorder is characterized by recurrent brief episodic attacks of vertigo occurring without warning and resolving spontaneously in otherwise healthy children.”

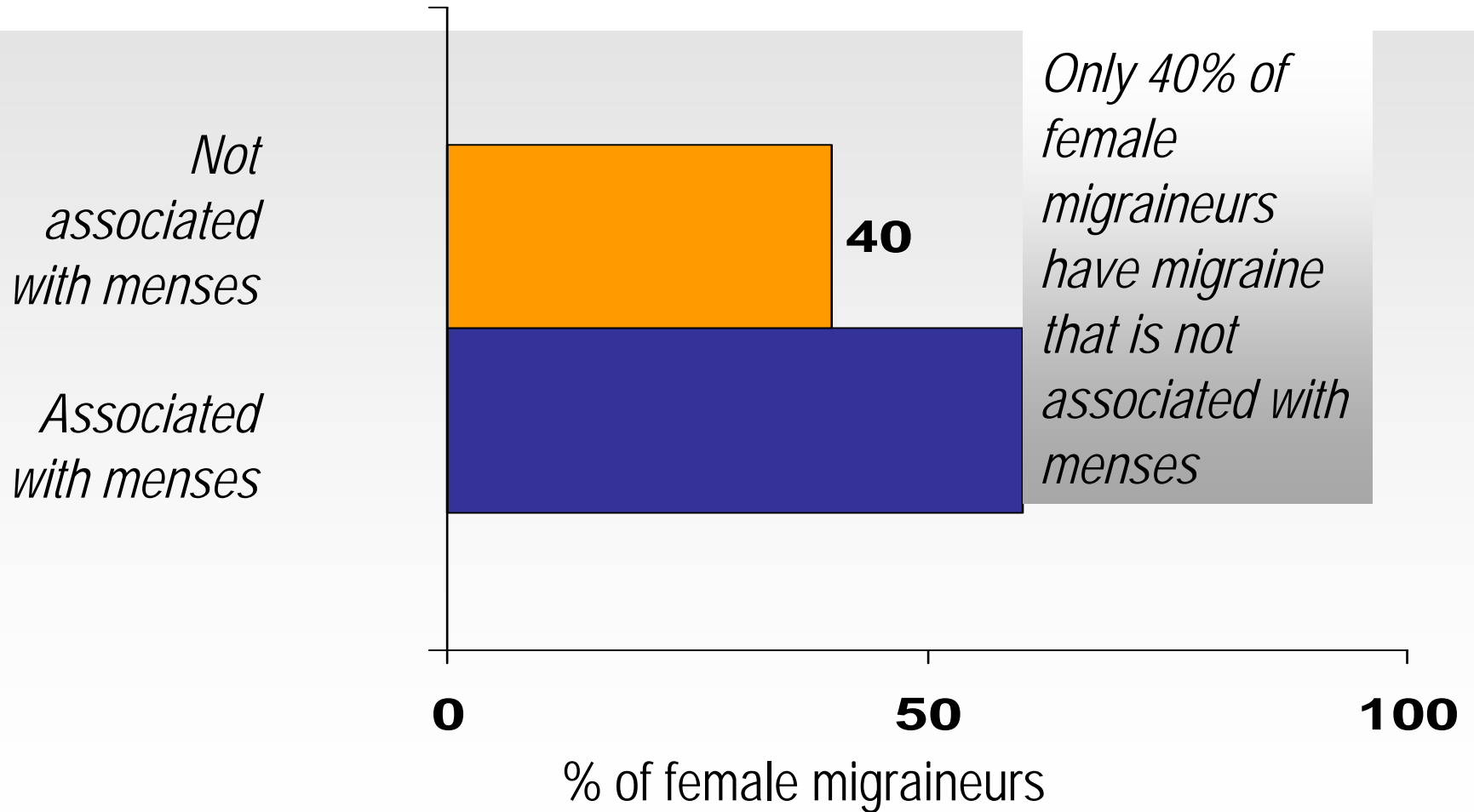


Clinical Course

- SP meets clinical diagnosis of migraine without aura and history of abdominal migraine
- Attacks are infrequent enough to initiate acute migraine-specific therapy only
 - Triptans should not exacerbate abdominal complaints (unlike NSAIDs)
 - May not need H-2 antagonists and antacids
- Discuss role of hormone fluctuations (e.g., menses) as trigger for menstrually associated migraine



Migraine and the Menstrual Cycle

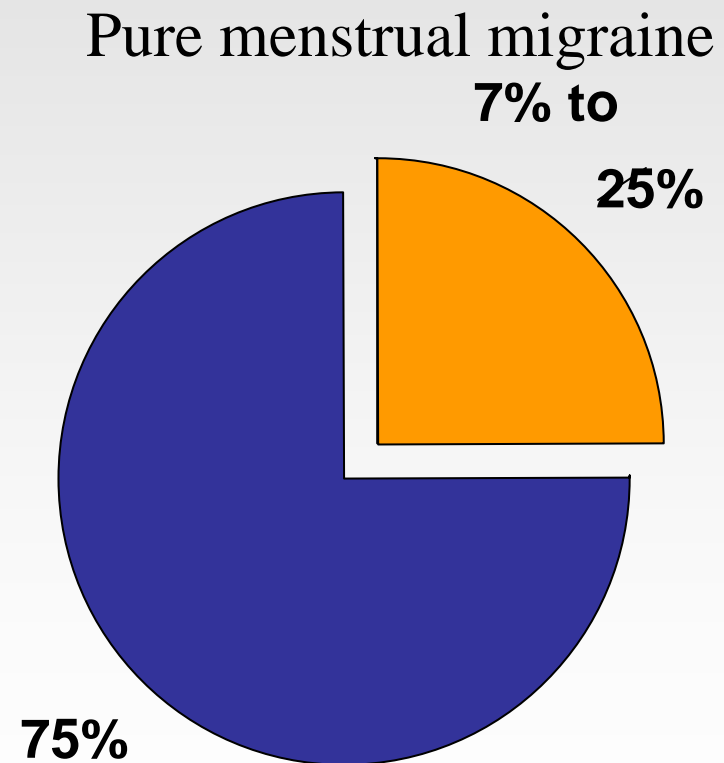




Prevalence of Pure Menstrual Migraine

*7%-25% of women
experience Pure
Menstrual Migraine*

*Migraine attacks occur
during menses and
not other times of the
month*





Question 4: Which of the following medications are considered migraine-specific?

- Triptans
- NSAIDs
- Butalbital-containing agents
- Dihydroergotamine (DHE)



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Question 5: What counseling would you provide SP regarding AEs and contraindications to triptans?

- Triptans have no adverse events.
- Triptans may be associated with some chest and throat discomfort
- Triptans should not be used in individuals in patients with significant cardiovascular disease
- Triptans should not be used in individuals with migraine with aura



Question 5: What counseling would you provide SP regarding AEs and contraindications to triptans?

What counseling would you provide SP regarding the common adverse events and contraindications to triptans

- Triptans have no adverse events.
- ✓ Triptans may be associated with some chest and throat discomfort
- ✓ Triptans should not be used in individuals in patients with significant cardiovascular disease
- Triptans should not be used in individuals with migraine with aura