CASE CHALLENGE

A 22-Year-Old Woman With Chronic Daily Headaches
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ABSTRACT
Tension-type headache is a common clinical complaint occurring in 78% of the general population. Chronic tension-type headache in adult patients is defined as attacks of headaches occurring on at least 15 days per month over a period of at least 3 consecutive months. The association between headaches and psychological factors represents a significant clinical problem that leads to a broader discussion about whether primary headaches could lead to anxiety or whether anxiety symptoms may precipitate primary headaches. This case highlights the positive outcomes associated with the appropriate identification and treatment of a comorbid psychiatric condition.

Keywords: anxiety, chronic daily headaches, cognitive behavioral therapy, evidence informed practice, selective serotonin reuptake inhibitor
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S.C. is a 22-year-old white female student who was seen by a nurse practitioner with a chief complaint of “My headaches have worsened in the past 8 months.” Although she had been treated with nonsteroidal anti-inflammatories and tricyclic antidepressants (TCAs), she only received minimal relief from them. Despite obtaining a previous referral to a neurologist, she had not kept the appointment. She presented to her primary care provider reporting headaches occurring 3 to 4 times weekly with pressing/tightening bandlike (nonpulsating) qualities in the frontal/temporal regions, bilaterally, without known trigger(s). She denied vomiting and photophobia/phonophobia and reported some nausea with headaches. She had visited urgent care for this complaint 2 months ago with discharge instructions showing a diagnosis of chronic tension-type headache (CTTH) with a prescription for amitriptyline (a TCA) 25 mg to be increased to 50 mg after 3 days. Because of the side effect of sedation, she ceased taking amitriptyline after 1 month. The laboratory work collected during the visit to urgent care included a complete blood count and tests for thyroid-stimulating hormone, lipids, vitamins B12 and D, serum human chorionic gonadotropin, folate, and a comprehensive metabolic panel. The results revealed a low vitamin D level, but all other laboratory values were benign. Previous treatment for headaches included acetaminophen, ibuprofen, aspirin, and naproxen with minimal relief.

S.C. stated her mood is “irritable” because of increased anxiety and admitted to a long-term pattern of worrying. She reported feeling down when having headaches but denied having thoughts of suicide, hopelessness, or excessive guilt. She denied anhedonia because she still enjoys her usual activities, such as cooking and hiking. She denied changes in appetite and/or psychomotor activity or a history of mania because she has never felt elated or irritable with increased activity and decreased sleep for more than a day at a time. She denied a history of pressured speech, of engaging herself in dangerous risk-taking activities, or of having grandiose thoughts. S.C. reported low energy, poor concentration, and significant insomnia. She endorsed feeling “overwhelmed” and finding it difficult to control worries about her academic performance, relationships, and future. She rated her anxiety as a 7 on a 1 to 10 scale (with 10 being the worst anxiety she has ever experienced). Her excessive worry has been negatively affecting her personal and academic functioning as well as her overall quality of life.

Her past psychiatric history includes no history of psychiatric hospitalizations, suicide attempts, suicidal ideation, or self-injury. S.C. reported 2 visits to the college counselor to discuss stressors, stating she did not
find this helpful. She also reported a history of family therapy as a child because of parental divorce. She denied any treatment history for mood disorders including dysthymia, depression, or bipolar disorder.

S.C. has a past medical history for vitamin D deficiency but no prior hospitalizations, surgeries, or trauma. Her medications include Ortho Tri Cyclen Lo (Janssen Pharmaceuticals, Piscataway, New Jersey, USA), over-the-counter ibuprofen as needed for pain, a multivitamin daily, and vitamin D3 5,000 mg daily. She has no known drug allergies.

S.C. is single; she never married and has no children. She is unemployed and currently a college student. S.C. resides with her mother and describes their relationship as “stressful.” S.C. hopes to graduate from college and work as an elementary school teacher with special needs children. S.C. reported her headaches began “off and on” since age 12 in the context of parental separation/divorce, with notable historic arguments previous to the divorce. She recently considered ending a 2-year relationship with her boyfriend because of his heavy alcohol use. S.C. stated that she has several close friends, including her best friend who attends the same college.

S.C. reported that she drinks 2 alcoholic beverages per week at social events with peers. She smoked a cigarette once and marijuana “socially” in high school but denies current nicotine or drug use. She drinks 1 cup of coffee daily. She denied any history of physical, emotional, or sexual abuse.

S.C.’s family history is as follows:
1. Mother, age 54 years: anxiety (taking alprazolam 0.5 mg as needed for anxiety)
2. Brother, age 35 years: dysthymia and anxiety (taking escitalopram 20 mg), which he finds “helpful”
3. Father, age 60 years: none reported
4. Her maternal aunt has a history of postpartum depression and was hospitalized once in a psychiatric unit
5. Paternal uncles and cousins have a history of alcohol abuse

A review of S.C.’s systems included the following:
1. Head, eyes, ears, nose, and throat: reported chronic pain from headaches and denied a change in vision, nose or ear problems, or sore throat
2. Cardiovascular: denied a history of hypertension, cardiac disease, or hyperlipidemia
3. Gastrointestinal: denied dysphagia, nausea, vomiting, constipation, or diarrhea
4. Genitourinary: denied dysuria, nocturia, polyuria, or vaginal bleeding
5. Musculoskeletal: denied arthralgia, muscle aches, or pain
6. Neurologic: denied weakness, numbness, or incoordination

The physical examination findings were as follows:
1. Vital signs: temperature of 98.6°F, heart rate of 74 beats/min, blood pressure of 130/80 mm Hg, pulse of 70, respirations of 18 breaths/min, height of 172.72 cm (68 in), weight of 58 kg (130 lb), and body mass index of 19.76 (normal body weight)
2. General: well-nourished, well-developed female; no acute distress; anxious; and cooperative
3. Cardiovascular: regular rate and rhythm; no gallops or murmurs
4. Respiratory: clear to auscultation
5. Abdomen: nontender, nondistended, and normoactive bowel sounds in all 4 quadrants
6. Extremities: no clubbing, cyanosis, or edema
7. Neurology: alert and oriented to person, place, time, and situation and followed simple commands
8. Speech: clear, difficult to interrupt, and hyperverbal; cranial nerves II-XII were intact without focal deficits noted

**CASE STUDY QUESTIONS**

1. What diagnostic tests would be helpful at this stage in the diagnostic process?
2. What differential diagnosis should be considered for S.C. to assess for psychiatric comorbidities?
3. Based on the available information, what is the most likely diagnosis and why?
4. What are the next steps in the management of this patient?

If you believe you know the answers to the following questions, then test yourself and refer to page XXX for the answers.
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