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Expert Opinion

CME

Periodic Hypnic Migraine

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"To sleep: perchance to dream: ay, there's the rub[1]:" awakened with a headache. Migraine or not migraine? That is the question.

CLINICAL HISTORY

A 56-year-old woman was seen with a 40-year history of headaches occurring about once every 3 to 6 months. The headaches only occur after she has been asleep for a few hours and never have an onset while awake. She describes a severe bifrontal-temporal throbbing with noise and possibly light sensitivity but no nausea or aura. If she takes 3 ergotamine with caffeine tablets, the headache goes away in about 15 minutes. Butalbital with aspirin and caffeine would only dull the headache, which could last for 1 to 2 days. Triggers include changes in the weather, alcohol, and staying up late. She reports no other headaches. Her mother had migraines.

Question.—What is the diagnosis?

EXPERT OPINION

This woman likely suffers from periodic hypnic (from Greek, sleep) migraine headaches. Primary headaches that can cause awakening from sleep are migraine, cluster headache, chronic paroxysmal hemicrania, and hypnic headache.[2-4]

The headaches, starting in this woman at the age of 16, are most likely migraine without aura, despite the lack of nausea or vomiting.[5] However, the patient reports noise sensitivity but possible light sensitivity—if absent, the headaches are consistent with probable migraine.[6] Migraine attacks are more common in women, start during the second to fourth decade, and can be precipitated by both oversleep and lack of sleep. As in this case, about 70% of migraineurs have a first-degree relative with migraine. Other known migraine triggers include those described in this patient. Her response to medication is also rather characteristic: ergotamine with caffeine is effective while the butalbital combination medication would dull the headaches, which would last for 1 to 2 days.

Here, the paroxysmal bilateral fronto-temporal headaches occur exclusively during sleep. Hypnic attacks occurring in those who also have migraines while awake are common. In a survey of 1283 migraineurs, 71% reported headaches awakening them from sleep (13% very frequent, 22% frequent, and 36% occasional).[7] Migraines are more likely to occur in association with rapid eye movement (REM) sleep and with morning arousals in association with excessive amounts of stage III, stage IV, and REM sleep.[8] The

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suprachiasmatic nucleus of the hypothalamus may be the origin of sleep-associated migraines.

It should be noted that neither the regularity of occurrence nor the fact that headaches occur solely at night is characteristic for migraine attacks; migraine attacks characteristically occur irregularly and at any time of the day. The precise predictability of the attacks in this case is fascinating and unexplained.

Because our patient's headaches are always bilateral without signs or symptoms of autonomic involvement, the diagnoses of cluster headache and chronic paroxysmal hemicrania highly are excluded. The regularity of occurrence at the same time during the day and every couple of months is more common in cluster headache. Cluster headaches have a daily or circadian rhythm with peak times of 1 to 2 am, 1 and 3 pm, and 9 pm. In a study of 77 cluster patients, 51% reported that attacks began when they were asleep.[9] The headaches may occur during REM sleep and during stages II and IV.

Chronic paroxysmal hemicrania is an indomethacin-responsive headache characterized by brief (2 to 30 minutes) and recurrent (more than 5 times a day for more than half of the time) attacks of severe, unilateral, orbital, supraorbital, or temporal pain, associated with autonomic symptoms such as tearing, conjunctival injection, and rhinorrhea. Nocturnal attacks occur in 65% of patients[10] typically during REM sleep.[11] Hypnic headaches typically have an onset in middle aged or older patients (with a reported range from 9 to 83 years[12]) with a duration of 15 minutes to 6 hours unlike this case with onset as a teenager and a duration of up to 1 to 2 days. Hypnic headaches, which can be unilateral or bilateral, throbbing or nonthrobbing, and mild to severe in intensity, only occur during sleep.

Conflict of Interest: None declared

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