CHAPTER 21

THE MAN WITH RECURRENT SUDDEN HEADACHES

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Case History

A 35-year-old male physician diagnosed himself as having a subarachnoid hemorrhage and was seen by a neurologist colleague within 20 minutes of the sudden onset of a severe generalized headache; it was the first and worst such headache in his life. The patient denied a precipitating event or triggering factor. The headache was throbbing but there were no other features of a migraine or cluster headache. There were no associated symptoms or systemic features such as fever or stiffness of the neck. The patient had been in excellent health without a past history of important illness. He did not smoke or drink excessively. His parents and two siblings were living and well, however, his mother had had migraine in her earlier years. The patient was married and had 2 children neither of whom had headaches.

General physical and neurologic examinations were normal. An emergency computed tomography (CT) scan of the head was normal. By the completion of the test 2 hours had passed and the headache had gradually disappeared. A lumbar puncture was recommended to rule out a small subarachnoid hemorrhage, but the patient refused, reasoning that serious disease would cause a more prolonged headache. The patient was told to call the neurologist immediately if similar headaches were to occur in the future.

The patient duly reported similar headaches but of only 15 minutes' duration occurring once or twice a week during the next 2 months. Repeated examinations were normal. Finally the patient sheepishly admitted that the headaches occurred immediately after sexual intercourse with his secretary but not with his wife. Coital headache was diagnosed and the patient was treated with indomethacin, 25 mg three times a day; an extra dose was to be taken before sexual intercourse. This course of therapy usually prevented headaches and those headaches which were not completely prevented were much less intense. After several months the patient began to have symptoms of upper gastrointestinal distress in spite of daily use of misoprostol. When the indomethacin was discontinued, the headaches following sexual intercourse returned but only occasionally.

Within 2 years the patient had divorced his wife and married his secretary. The coital headaches did not occur again.

Questions about This Case

- What other diagnostic considerations should be entertained?
- What other laboratory studies should be considered?
- Was the initial evaluation adequate?
- What other therapeutic modalities might be considered?

Case Discussion

There are several terms for coital headache such as "benign coital cephalalgia," "benign orgasmic cephalalgia," or more properly "headaches associated with sexual activity." The latter term is preferred because not all such headaches are associated with sexual intercourse; for example, they may be associated with masturbation. Similarly orgasm need not occur for the development of headache. Benign coital cephalalgia is also not an ideal term because headaches associated with sexual activity are not necessarily benign.

From 5 to 12% of subarachnoid hemorrhages occur with the exertion of sexual intercourse. Sexual activity may precipitate a cerebral hemorrhage in a hypertensive

patient who experiences an additional rise in blood pressure with coitus; a pheochromocytoma is another consideration. Cerebral or brain-stem infarction also may occur. Other diseases in the differential diagnosis are Arnold-Chiari malformation, other abnormalities of the cervicalcephalic juncture and a colloid cyst of the third ventricle. Additional diagnostic considerations are the thunder-clap headache associated with cerebral vasospasm and the sentinel headache preceding a full-blown subarachnoid hemorrhage. Of course, forms of exertion other than coitus may lead to a sudden severe headache. About 1 in 5 patients who have headaches associated with sexual activity also have headaches triggered by exertion.

Headaches associated with sexual activity occur more commonly in men than in women; the ratio is approximately 4 to 1. The headache does not occur with every sexual act. Fortunately it is infrequent; unfortunately it is unpredictable. There are three types of headache associated with sexual activity related to associated physiologic changes. An explosive headache occurs approximately 75% of the time, a dull ache 20%, and a post-lumbar-puncture-like headache 5% of the time. Coitus is accompanied by elevated pulse, blood pressure, muscle tone, and intracranial pressure; vasodilation also occurs. The most common headache type is sudden and severe, often likened to an explosion, occurring in association with orgasm. The headaches are not necessarily correlated with the degree of sexual excitement and may occur both before and after orgasm. However, coital headache is often associated with sexual activity that is illicit, as in the case described. The headache associated with sexual activity is more often throbbing than a steady ache; it may be generalized or predominant over the occipital area. The duration of the headache ranges from several minutes to 1 or 2 hours. Occasionally a specific position during sexual intercourse may provoke the headache. This first type of headache associated with coitus occurs more often in migraineurs than in the population as a whole. Occasionally nausea and vomiting are associated with the headache and, when the pain is throbbing, migraine may be misdiagnosed. About two-thirds of people who experience headache with sexual activity have a history of migraine. The sudden increase in intracranial pressure associated with orgasm evokes pain presumably by stretching the meninges and the basilar blood vessels.

A second headache associated with sexual activity is a dull ache throughout the head and neck that intensifies as sexual excitement increases. This headache is probably due to increasing tension of the neck and scalp musculature as part of the generalized increase in muscle tone during sexual activity. The headache associated with the gradual increase in muscle tone can be relieved by deliberate relaxation during sexual activity. The third and least common headache associated with coitus is a postural headache, with pain that occurs when the patient is upright and subsides when the patient is horizontal; the same type of headache may occur after a lumbar puncture. This headache is attributed to a tear in the meninges that rarely occurs with the sudden rise in intracranial pressure during orgasm.

Headaches associated with sexual activity may be difficult to diagnose because patients are often too embarrassed to see a doctor or, as in the case described, too embarrassed to relate the circumstances of the triggering event. Sometimes fear of headache may cause abstinence or impotence with a consequent feeling of rejection by the sexual partner and associated marital strife. The partner may feel that headache is used as the proverbial excuse to avoid sexual intercourse. The examiner should specifically ask about the relationship of sexual activity to the onset of headache rather than simply asking if there were precipitating or associated events.

Headaches associated with sexual activity are not absolutely responsive to indomethacin, as are the paroxysmal hemicranias and hemicrania continua. But, if not completely effective, indomethacin usually decreases the frequency of occurrence and the intensity of the pain. If indomethacin fails, other therapies are often effective, particularly those used for migraine. Propranolol may be useful as a prophylactic agent, however, it may also impair sexual potency. Ergotamine may be used in anticipation of the headache before sexual intercourse or for treatment of the acute pain, if it is prolonged.

Management Strategies

- Establish the correct diagnosis. Determine whether sexual activity was a factor in the onset of the headache.
- Consider the differential diagnoses especially subarachnoid hemorrhage and Arnold-Chiari malformation.
- To rule out subarachnoid hemorrhage, a CT scan of the head is usually all that is necessary, but if there is any doubt about the diagnosis, a lumbar puncture should be performed. Cerebral arteriography is rarely necessary.
- If recurrent headaches are frequent, prophylactic therapy with propranolol or indomethacin may be warranted.
- Reassure the patient that this is a benign condition but that any changes should be reported immediately.

Case Summary

Coital headache or, more accurately, headache associated with sexual activity can be diagnosed easily if the patient is forthcoming or the physician is inquisitive. Serious diseases such as subarachnoid hemorrhage and Arnold-Chiari malformation should be considered. Treatment

with propranolol or indomethacin is usually effective but not absolutely so. The patient and the patient's partner should be reassured that the condition is benign.

Overview of Indomethacin-Responsive Headaches

There are two headaches that are invariably responsive to indomethacin, namely episodic or chronic paroxysmal hemicrania and hemicrania continua. Other brief headaches are partially responsive to indomethacin. They include exertional or cough headaches, ice-pick headaches or jabs and jolts of head pain (idiopathic stabbing headache), and headache associated with sexual activity.

Selected Readings

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Editorial Comments

Headaches associated with sexual activity can be a diagnostic problem for the clinician, if the patient is not forthcoming, as Dr. Solomon points out. Serious etiologies are rare but must be considered and excluded in all cases. Treatment strategies are oulined and are of some value. One wonders if some of the newer triptans with a longer half-life leading to less recurrence will be helpful in such cases or if rapid onset of action of the newer triptans will abort post-sexual-activity severe headache.