Expert Opinion

Orgasmic Headaches: Clinical Features, Diagnosis, and Management

Case Histories Submitted by Randolph W. Evans, MD
Expert Opinion by Julio Pascual, MD

Key words: orgasmic, sexual, exertional, cough, headache
(*Headache* 2000;40:491-494)

The three patient histories presented here raise questions regarding several headache syndromes. Orgasmic, exertional, and cough headache are relatively rare, but they can pose a difficult dilemma with regard to investigations and management.

CLINICAL HISTORIES

Patient 1.—This 48-year-old woman has had migraine without aura since she was a teenager. Triggers for migraine, which now occur about four times a year, include stress, wine, and menstruation. In addition, since 1991, she has had activity-provoked headaches. In 1991 and 1993, she had about six identical headaches triggered by sexual orgasm and several triggered by bowel movements. In 1996, she again had a few headaches triggered by orgasm. Three weeks ago, she had a typical headache brought on by orgasm and has had four more since. She has also had three similar headaches triggered by weight lifting (a new activity for her) that quickly subside if she stops lifting. The orgasmic headaches also quickly subside if she discontinues the sexual activity.

The activity-related headaches consist of a throbbing in the middle of her head "like my head is going to explode" and are a 10 of 10 in intensity. There is no associated nausea or sensitivity to light or noise. The headaches last no more than a few minutes. In 1991, 1993, and 1996, after the first headache brought on by orgasm, she would have a mild daily headache for several days afterward. For the last 3 weeks, she has had the same type of fairly constant mild headache described as a pressure and ache over the sides of her head. Ibuprofen and indomethacin help only a little. Her past medical history is noncontributory. Her blood pressure and the results of general and neurological examinations were normal. The findings of magnetic resonance imaging (MRI) and intracranial magnetic resonance angiography (MRA) of the brain obtained 1 week prior to her neurology consultation were normal.

Questions.—How often are benign orgasmic headaches associated with the same headache brought on by other activities such as weight lifting or straining with a bowel movement? What is the significance of the fairly constant dull headache lasting up to a few weeks triggered four times since 1991 by the initial orgasmic headache? Is this a well-described association? Was the MRI scan necessary?

Patient 2.—This 39-year-old man has a 2-week history of three identical orgasmic headaches described as severe, bitemporal, and nuchal-occipital pounding without associated symptoms. All three headaches lasted about 12 to 14 hours and became duller before resolving. During the last 2 weeks, he has also engaged in sexual activity about five times without any headache. There is a 20-year history of occasional migraine without aura (a bitemporal throbbing with nausea). His past medical history is noncontributory. His blood pressure and the results of

Address correspondence to Dr. Randolph W. Evans, Suite 1370, 1200 Binz, Houston, TX 77004 or Dr. Julio Pascual, Service of Neurology, University Hospital Marqués de Valdecilla, 39008 Santander, Spain.

the general and neurological examinations were normal. The findings of an MRI scan of the brain with intracranial MRA were normal.

Questions.—How often is the duration of benign orgasmic cephalalgia more than 3 hours? In this case, was obtaining an MRI and MRA reasonable? When do you obtain neuroimaging of such patients? Is there an increased incidence of migraine in patients with benign orgasmic cephalalgia?

Patient 3.—This patient has had recurrent benign orgasmic cephalalgia for 1½ years without remission. She is 54 years old and also has a 10-year history of migraine with aura. The exertional headaches are also triggered by straining with bowel movements. The headaches are a generalized exploding feeling lasting about 20 minutes. The findings of a recent MRI scan were normal. She has already consulted three other neurologists and has been prescribed indomethacin, verapamil, and propranolol without benefit. Following my suggestion, she tried naratriptan, 2.5 mg orally, 2 hours before sexual activity and did not have a headache with orgasm.

Question.—Do you have any experience with triptans for the prevention of this type of headache?

EXPERT COMMENTARY

These three patients all have acute, benign headache triggered by orgasm. In general, the headaches fulfil the current International Headache Society (IHS) criteria for the explosive type of "headache associated with sexual activity," as they were precipitated by excitement (orgasm), were bilateral, and were not associated with any intracranial disorder such as aneurysm.[1] There are two other types of benign headache associated with sexual activity. Type 1 or the dull type was detailed by Lance in his landmark paper and resembles muscle-contraction headache,[2] while type 3 or postural sexual headache was proposed by Paulson and Klawans as a low cerebrospinal fluid (CSF) pressure-type headache resulting from a tear of the dura during sexual intercourse.[3] At least in terms of consultation, the explosive or "vascular" type of sexual headache is the most frequent (0.4% of all headache consultations in our experience in a general neurological department).

This benign, explosive *sexual headache* has been classically described in the medical literature under the rubric *exertional headache* together with two more provoked headaches: *cough headache* and *exercise-induced headache.*[4] *Cough headache* refers to that sudden and brief (lasting a few minutes) headache precipitated by a variety of Valsalva maneuvers, including coughing, sneezing, nose blowing, laughing, crying, lifting a burden, straining at stool, or stooping. About half of the individuals with cough headache, mostly older men, have a normal neuroradiological evaluation (benign cough headache), whereas in the other half, cough headache is symptomatic usually of a posterior fossa structural lesion, almost always an Arnold-Chiari type 1 deformity.[5]

According to the IHS, *benign exertional headache* is specifically brought on by (more prolonged) physical exercise, is bilateral, throbbing, and lasts longer than cough headache (5 minutes to 24 hours). Like benign cough headache, benign exertional headache exhibits a clear male predominance, but it is typical of young people, starting, on average, 4 decades earlier than benign cough headache.[6] In some patients, exertion-induced headache is secondary to either an intracranial space-occupying lesion or, more frequently, to a sentinel aneurysmal hemorrhage. Taking all this into account, it seems that cough headache and exertional headache are clinically separate conditions, but what about explosive sexual headache?

About 60% of patients experiencing this headache suffer from isolated sexual headache, but the remaining 40% experience sexual headache together with cough or exertional headaches.[7] Interestingly, patients 1 and 3 could also be diagnosed as suffering from cough headache as their headaches were also provoked by other Valsalva maneuvers, such as weight lifting or straining, thus suggesting a link between benign cough and sexual headaches. There are, however, a number of arguments also supporting a common origin for exertional and sexual headaches. Contrary to two of the patients we are commenting on here, the two types of headache typically occur in young to middle-aged males. A migrainous flavor is obvious for both entities. As occurred in these three cases, most patients suffering from either sexual headache or exertional headache have a personal his-

tory of migraine, and these two provoked headaches, contrary to cough headache, share migraine features and usually respond to antimigraine medications. Therefore, whether sexual headache is or is not a true individualized entity is unknown. In any case, as sexual intercourse is indeed a complex exertion in which both Valsalvalike and more prolonged efforts coexist, it is logical to propose that explosive headache associated with sexual intercourse is actually a variety of provoked headache.

One further point deserving some comment is the coexistence of headaches of long duration (hours to several weeks) precipitated by sexual intercourse, as was seen in patients 1 and 2. The typical duration of sexual headache ranges from several minutes to 3 hours.[6] Headaches of longer duration precipitated by sexual intercourse oblige us to exclude secondary sexual headaches (see below) or they can also be either the dull or the postural variety of sexual headaches. As these two cases show, however, prolonged (usually bilateral but with migrainous features) benign exertional headache can occasionally occur.[8]

Given the clinical and etiological heterogeneity of provoked headaches, one relevant practical question is which complementary studies are indicated in these patients. For typical patients (middle-aged men) with pure sexual headache or with both sexual and exertional headache, it is mandatory to exclude intracranial space-occupying lesions and, more urgently, sentinel hemorrhage due to vascular malformations. Thus, classically, the minimum recommended workup includes a computed tomography (CT) brain scan and, in doubtful cases, a lumbar tap followed by a cranial angiographic study if there is evidence of subarachnoid hemorrhage. Nowadays, MRI followed by MRA can be recommended as the initial screening procedures due to both their sensitivity in excluding space-occupying lesions and vascular malformations and their noninvasive nature. For patients 1 and 3 with both sexual and Valsalva maneuver or cough headache, it was necessary to obtain an MRI study specifically looking at the foramen magnum area.[5,6]

Leaving sexual abstinence aside, there is no scientific evidence regarding the value of pharmacological treatments in the management of sexual headache. In general, antimigraine medications show some benefit. For most patients, prophylactic treatment with a beta-blocker (propranolol) seems to be very useful, even though the capricious nature of these headaches precludes the drawing of definite conclusions. There are well-documented cases of patients whose sexual headache, as was the case for patient 3, did not improve on propranolol. Some of these cases, although not all, as case 3 shows, seem to improve with indomethacin or calcium-channel antagonists, such as verapamil or flunarizine. For those cases unresponsive to these prophylactic medications, there are no clear further options, even though I would recommend a desperate trial of methysergide or valproic acid in antimigraine doses.

Acute preventive therapy, immediately before the sexual act, can be a good alternative for those patients unresponsive to prophylactic treatment and for those subjects with a low frequency of sexual intercourse. Simple analgesics and NSAIDs do not seem to prevent the development of sexual headache. Ergotamine-containing medications seem to be efficacious in about half of these patients, if taken appropriately. Triptans could theoretically be an alternative treatment to ergotamine but, again, there is no scientific evidence confirming or refuting the possible value of triptans in the acute treatment of sexual headache.

One further interesting practical point would be which triptan should be recommended in these cases of sexual headache. For instance, should naratriptan be the routinely recommended triptan, as suggested for patient 3, in view of its good tolerability profile? One could argue that the rather delayed T_{max} of naratriptan would not prevent the development of headache in short-lasting, unanticipated sexual intercourse; maybe more rapidly acting triptans, such as rizatriptan or eletriptan, would be the drugs of choice in these situations. In contrast, triptans with a longer T_{max} and half-life, such as naratriptan or frovatriptan, could be the drug of choice for those who, for whatever reason, reach orgasm more slowly. Perhaps after this apparent epidemic of sexual headache in Houston, we will have answers to these interesting questions.

REFERENCES

1. Headache Classification Committee of the International Headache Society. Classification and diagnos-

tic criteria for headache disorders, cranial neuralgias and facial pain. *Cephalalgia.* 1988;8(suppl 7):1-96.
2. Lance JW. Headaches related to sexual activity. *J Neurol Neurosurg Psychiatry.* 1976;39:1226-1230.
3. Paulson GW, Klawans HL Jr. Benign orgasmic cephalgia. *Headache.* 1974;13:181-187.
4. Sands GH, Newman L, Lipton R. Cough, exertional, and other miscellaneous headaches. *Med Clin North Am.* 1991;75:733-747.
5. Pascual J, Oterino A, Berciano J. Headache in type I Chiari malformation. *Neurology.* 1992;42:1519-1521.
6. Pascual J, Iglesias F, Oterino A, Vázquéz-Barquero A, Berciano J. Cough, exertional, and sexual headaches: an analysis of 72 benign and symptomatic cases. *Neurology.* 1996;46:1520-1524.
7. Silbert PL, Edis RH, Stewart-Wynne EG, Gubbay SS. Benign vascular sexual headache and exertional headache: interrelationships and long term prognosis. *J Neurol Neurosurg Psychiatry.* 1991;54:417-421.
8. Diamond S. Prolonged benign exertional headache: its clinical characteristics and response to indomethacin. *Headache.* 1982;22:96-98.