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Review Article

What if the 'sexual headache' is not a joke?

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Abstract

Headaches and sexual activity are often treated with humour as a typical way for women to reject male advances. However, headaches associated with sexual activity can be anything but a joke.

HSA (headaches associated with sexual activity) are by definition benign conditions but the symptoms can be the same as in serious life threatening cerebral conditions and these need to be quickly excluded at the first presentation. Most sexual headaches are of a benign nature. However, the first time an HSA occurs it can be a traumatic, frightening occurrence for the patient. HSA are capricious in nature with poorly understood pathophysiology and uncertain course of the condition. Patients need to have the situation clearly explained to them so that management can be optimal.

However, good overall management of a patient with HSA should also include discussions about possible negative sexual consequences of the HSA experience. Sexuality can be affected by HSA both during the active condition and subsequently. Sexuality must be addressed by the treating physician if the patient/couple are not to be left with an ongoing negative effect on their future sex life as a consequence of the HSA.

Keywords

sexual headache, sex, sexuality, headache

Headaches associated with or occurring around sexual activity have been recognized since the time of Hippocrates [1, 2]. Wolff [3] discussed headache during sexual activity in 1963. However, these headaches started to be formally reported in the 1970s, first by Kitz in 1970 [4] and then Paulson [5] and Martin [6] in 1974. The first published study was by Lance in 1976 [7].

Classification

This type of headache has been given many different names: benign sex headache (BSH), benign coital headache, coital cephalgia, orgasmic cephalgia, primary headache associated with sexual activity (PHSA), coital 'thunderclap' headache, primary thunderclap headache (PTH), orgasmic headache (OH) and preorgasmic headache.

In 2004the International Headache Society [8] classified HSA as a distinct form of primary headache.These benign HSA are bilateral headaches, precipitated by sexual excitement (masturbation or coitus) occurring in the absence of any intracranial disorder and which can be prevented or eased by ceasing activity before orgasm. Type 1 consists of a bilateral, usually occipital, pressure-like headache that gradually increases with mounting sexual excitement. Type 2 headaches have an explosive, throbbing quality and appear just before or at the moment of orgasm. These often start occipitally but may generalize rapidly [9].

However, there are individuals who experience patterns of HSA that do not fall within the classifications and are included as a subgroup of HSA with unusual psychopathology [10]. For example, Paulson and Klawans [5] described a rare type postural sexual headache after coitus, which is present on standing, eased by lying, accompanied by a low CSF pressure, and persists for several weeks.

International Headache Society diagnostic criteria - ICHD-2[7] classification for HSA

4.4 Primary headache associated with sexual activity

4.4.1 Pre-orgasmic headache

A. Dull ache in the head and neck associated with awareness of neck and/or jaw muscle contraction and fulfilling criterion B.

B. Occurs during sexual activity and increases with sexual excitement

C. Not attributed to another disorder

4.4.2 Orgasmic headache

A. Sudden severe ("explosive") headache fulfilling criteria B

B. Occurs at orgasm

C. Not attributed to another disorder

7 Secondary headache disorder

7.2.3 Headache attributed to spontaneous (or idiopathic) low CSF pressure

Prevalence

HSA are not common but it is generally felt that they are under-reported due to patient embarrassment [1] at telling health professionals when their headaches occur. Prevalence in the general population is reported at around 1% [11, 12] and is greater in men than in women, by 3-4 times [11, 13-16]. There appear to be two peak times of onset: in the early 20s and then around age 40 [17]. About 22% of HSA are Type 1 and 78% are Type 2 [18]. The male:female ratio is the same for Type 1 and Type 2 headache.

Pathophysiology

HSA are not clearly understood but by definition lack serious underlying disease. They are however, unpleasant, frightening, repetitive and episodic. The clinical characteristics of Type 1 suggest a relationship with tension/muscular contraction headaches [2, 13, 15, 16]. There is a significant association between the risk of having more than one cluster of HSA and the presence of tension headaches or migraine [11, 14-17, 19-21]. Biehl [11] concluded that the association between migraine and HSA is bilateral. The prevalence of migraine in HSA patients is 25-47% [15, 16, 20]. Ostergaard [14]showed that the presence of concomitant migraine or tension headache was significantly associated with the recurrence of periods lasting weeks to months in which HSA occurred. Patients without another primary headache often have only one HSA period or episode and a more favourable prognosis . Migraine is co-morbid in 30% of Type 2 as opposed to 9% with Type 1. Co-morbidity is also seen in exertional headaches, 35% of Type 2 and 9% Type 1[17, 18]. There can be simultaneous onset of benign exertional headache (BEH) and HSA [22] as well as HSA after a history of BEH [16, 22].

Several drugs have been linked in case reports to sexual headaches associated with neurologic symptoms: Amiodarone[23], birth control pills [24], pseudoephedrine [7] and cannabis [25].An interesting more recent addition to HSA is that resulting from the use of PDE5 medication to assist in erectile difficulties [26, 27].

In type 2 headaches, increased intracranial pressure secondary to a Valsalva maneuver during orgasm has been proposed as a possible mechanism. Blood pressure may increase by 40-100mmHg systolic and 20-50mmHg diastolic during orgasm [7, 28-30]. A possible disruption of autoregulation of the cerebral vasculature has also been proposed [31-33].

Classic presentation

A male patient, middle-aged, in poor physical shape, mildly to moderately overweight, and mildly to moderately hypertensive [34]. In women muscle contraction and psychological factors are often involved [34].

The typical story is that the headache occurs during sexual activity, is bilateral and stops or is less severe if sexual activity stops prior to orgasm. The duration varies from 5 minutes to 2 hours if sexual activity stops and from 3 minutes to 4 hours, with the possibility of milder symptoms up to 48hours, if activity continues.

Differential diagnosis

With the first episode it is absolutely mandatory to exclude potentially life threatening and disabling causes. A thorough history and neurological examination with the option of imaging studies and CSF examination must be conducted.

Type 2 explosive "thunderclap" headaches can be secondary to subarachnoid haemorrhage, aneurysms without obvious rupture, intracerebral haemorrhage, pituitary apoplexy, venous sinus thrombosis, cervical artery dissection, subdural haematoma, haemorrhage into an intracranial neoplasm [35], cerebral tumour [36], intracranial hypotension and hypertension, significant cervical spine disease, and ischaemic stroke [37-43] and these serious conditions need to be excluded before an HSA diagnosis can be given. HSA may present similarly to paroxysmal headaches caused by phaeochromocytoma [44].

Sexual intercourse is reported as a precipitating cause of subarachnoid haemorrhage in 3.8% to 12% of patients with bleeding from a ruptured aneurysm [35].

Course of the disease

The unpredictable clinical course falls into 2 temporal patterns: an episodic course with remitting bouts, and a chronic course [20]. In most cases the headaches occur in bouts that recur over periods of weeks to months before resolving[16, 45].

The episodic type is defined as a bout of at least 2 attacks occurring in ≥ 50% of sexual activity followed by no attack for ≥ 4 weeks despite continuing sexual activity. The chronic course is defined as ongoing HSA attacks for ≥ 12 months without remission of ≥ 4 weeks [20].

Further uncertainty is experienced by the patient as HSA does not necessarily occur in every sexual encounter [7, 19]. A characteristic of HSA is the sporadic vulnerability of patients to the headache. Episodes can occur singly, in clusters or at irregular intervals. Recurrence can occur years later.

The acute HSA attacks are usually short lasting but the overall duration of pain can vary widely [17]. The mean duration of severe pain in HSA is similar (30 minutes) in type 1 and type 2 but the mean duration of milder pain is more prolonged with type 2 (4 hours vs 1 hour). About 15% of patients suffer from severe pain for >4hours needing acute treatment. Severe pain continuing for 2-24 hours occurs in up to 25% of patients with HSA [17]. Patients with episodic HSA compared to chronic HSA have an earlier age at onset and tend to suffer more often from concomitant BEH [20].

About 30% of patients report headaches with masturbation as well as intercourse. There are also reports of HSA occurring exclusively during masturbation [46, 47] and a case of this occurring with nocturnal emission [21].

Overall HSA occurs more commonly when the patient is tired, under stress or attempting intercourse for the second or third time in close succession [48]. HSA appears in bouts lasting weeks to months and can disappear without specific treatment [14, 16]. The number of attacks within one bout ranges from 2 to 50 [17]. About 25% of patients suffer attacks without longer remissions.

Prognosis

Prognosis is usually good for HSA as it is a benign self- limiting disorder and disappears without any specific treatment in the majority of patients [17]. It is usually better if there has been only one attack, especially if it was not associated with any other type of headache.

Frese [20] concluded that episodic HSA occurs in approximately 75% and chronic HSA in approximately 25% of patients. However even in chronic HSA, the prognosis is favourable, with remission rates of 69% in patients followed over 3 years.

Management

A thorough history and examination is mandatory in a first attack.

Referral is warranted if:
Atypical story and suspicious examination
First episode of severe headache where headache still present
A recurrent episode of severe headache with longer than average duration
Neck stiffness, photophobia or vomiting
Altered consciousness or confusion
Focal neurological signs
Previous history of AV malformation, neoplasms or neurosurgery

Investigations
Computed tomography
MRI
Lumbar puncture
Cerebral angiography
Urinary catecholamine

Medical treatment

Turner [49] has provided a good review.

Pre-emptive treatment

Propanolol hydrochloride (Inderal) is effective in the prophylaxis of HSA[19]. Naratriptan 2.5mg has been reported as useful prior to sexual activity [50] but due to lower absorption rates needs to be taken more than 60 minutes before sexual activity [30]. Indomethacin 25-100mg can be taken 30-60 minutes prior to sexual activity [15, 16, 45, 51] and for acute severe pain management [20] but can cause serious gastrointestinal side-effects and is not tolerated by about 10% of headache patients [52].

Acute treatment

Triptans shorten the attack in about 50% of patients[30]. There is an 80% response rate [30]. Analgesics (ibuprofen, diclofenac, paracetamol, acetylsalicylic acid) given after onset of headache are of limited or no value in nearly all patients[45].

Other triptans, ergots and benzodiazepines have also been reported to have efficacy [5, 24, 53, 54] for acute and pre-emptive treatment for those patients not tolerating indomethacin. Taken 30 minutes before sexual activity they shorten orgasmic headache attacks in 66% of users [30].

Long term prophylaxis for longer lasting bouts or continued attacks

Options include indomethacin 25mg three times a day, propanolol 120-240mg per day, metoprolol 100-200 mg per day and diltiazem 180 mg per day [15, 19, 20, 22, 24, 45]. There is about an 80% response rate [30].

Sexual management

Trauma due to pain associated with sexual activity has the potential to affect immediate and long term satisfaction with sexual activity unless specifically addressed. HSA can be very distressing for both patient and partner with the development of fears around sexual activity and orgasm. Patients may develop patterns of impaired sexual arousal. If these fears are not exposed and dealt with, sexual problems may occur. Secondary avoidance behaviours may become established in the relationship leading to a decrease in couple's physical affection, eroticism and sexual activity. Patients must be given the opportunity to talk about sexual fears in an ongoing way, especially if HSA is chronic.

The social and relationship history will disclose areas of stress which should be evaluated and managed as best possible. In type 1 HSA where neck and jaw tension may be a factor, conscious relaxation of these muscles during intercourse may help [7]. Relaxation exercises especially concentrating on neck and shoulder tension can be done regularly and particularly before anticipating sexual activity.

Individuals often sense early in the lovemaking process whether or not HSA will occur and encouragement not to pursue orgasm on that occasion can be helpful. Some patients can terminate the headache by stopping the sexual activity or suppressing orgasm and about 51% can lessen the intensity of pain by being more sexually passive [18].

Advice on continuing to engage with the partner despite ceasing or modifying one's own sexual arousal needs to be given. Having a disappointed or resentful partner increases the distress of the condition so partner needs have to be discussed. Patients often have difficulty talking about sexual issues with both their partner and their doctor, therefore the doctor needs to be the one to raise the subject.

A brief sexual history will outline the love-making practice and modification to sexual positions, especially where neck tension is exaggerated, may help. In one report, the advice to engage in intercourse more frequently but less strenuously resulted in a reduction in headaches [5].

Avoiding sexual activity and strenuous activities until totally symptom free has been recommended by some [13, 22, 24, 55]. This may be difficult to follow as the capricious nature of HSA makes knowing when they have stopped difficult.

Conclusion

HSA are benign, but because they can mimic serious conditions, patients need to be properly assessed before reassurance is given and management of HSA started. Because pain can alter sexual experience and behaviour around sexuality for the patient and the couple, this aspect of patient wellbeing must be addressed by the treating physician for good holistic management. As not everyone is comfortable with addressing sexuality with patients, respectful acknowledgement of the situation and appropriate referral can be a useful approach

COMPETING INTERESTS
None declared
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REFERENCES

1. Adams, F., The genuine works of Hippocrates. Vol. 94. 1848, London: Sydenham Society.
2. Masters, W. and V. Johnson, Human sexual response. 1966, Boston: Little Brown.
3. Wolff, H., Headache and other head pain. 1963, Oxford University Press: New York. p. 450-451.
4. Kritz, K., Coitus as a factor in the pathogenesis of neurological complications. Cesk Neurol Neurochir, 1970. 33: p. 162-167.
5. Paulson, G. and H. Klawans, Benign orgasmic cephalgia. Headache, 1974. 13: p. 181-187.
6. Martin, E., Headache during sexual intercourse (coital cephalalgia). Ir J Med Sci, 1974. 143: p. 342-345.
7. Lance, J., Headache related to sexual activity. J Neurol Neurosurg Psychiatry, 1976. 39: p. 1126-1130.
8. Society, I.H., The International Classification of Headache Disorders. Cephalalgia, 2004. 24: p. 37-39, 50-52, 58-59, 136.
9. Cutrer, F. and C. Boes, Cough, exertional and sex headaches. Neurol Clin N Am, 2004. 22: p. 133-149.
10.Chakravarty, A., Must all patients with headaches associated with sexual activity fulfill ICHD-2-criteria? Headache, 2007. Journal compilation 2007: p. 436-438.
11. Biehl, K., S. Evers, and A. Frese, Comorbidity of migraine and headache associated with sexual activity. Cephalalgia, 2007. 27: p. 1271-1273.
12. Rasmussen, B. and J. Olesen, Symptomatic and non-symptomatic headaches in a general population. Neurology, 1992. 42: p. 1225-1231.
13. Lance, J., Benign coital headache. Cephalalgia, 1992. 12: p. 339.
14. Ostergaard, J. and M. Kraft, Natural course of benign coital headache. BMJ, 1992. 305(7 November): p. 1129.
15. Pascual, J., et al., Cough, exertional and sexual headaches. An analysis of 72 benign and symptomatic cases. Neurology, 1996. 46: p. 1520-1524.
16. Silbert, P., et al., Benign vascular sexual headache and exertional headache: interrelationships and long term prognosis. J Neurol Neurosurg Psychiatry, 1991. 54: p. 417-421.
17. Frese, A., et al., Headache associated with sexual activity. Demography, clinical features and comorbidity. Neurology, 2003. 61: p. 796-800.
18. Evers, S. and J. Lance, eds. Primary headache attributed to sexual activity. 3rd ed. The Headaches, ed. J. Olesen and e. al. 2006, Lippincott Williams & Wilkins: Philadelphia, PA. 841-845.
19. Johns, D., Benign sexual headache within one family. Arch Neurol, 1986. 43: p. 1158-1160.
20. Frese, A., et al., Headache associated with sexual activity: prognosis and treatment options. Cephalalgia, 2007. 27: p. 1265-1270.
21. Selwyn, D., A study of coital related headaches in 32 patients. Cephalalgia, 1985. 5(Suppl. 3): p. 300-301.
22. Edis, R. and P. Silbert, Sequential benign sexual headaches and exertional headaches. Lancet, 1988. 1(8592): p. 993.
23. Biran, I. and I. Steiner, Coital headaches induced by amiodarone. Neurology, 2002. 12(58): p. 501-502.
24. Porter, M. and J. Jankovic, Benign coital cephalalgia. Arch Neurol, 1981. 38: p. 710-712.
25. Alvaro, L., I. Irionodo, and F. Villaverde, Sexual headache and stroke in a heavy cannabis smoker. Headache, 2002. 42: p. 224-226.
26. Basson, R., et al., Efficacy and safety of Sildenafil Citrate in women with sexual dysfunction associated with female sexual arousal disorder. J of Women's Health and Gender-Based Medicine, 2002. 11(4): p. 367-377.
27. Christiansen, E., et al., Long-term efficacy and safety of oral Viagra (Sildenafil Citrate) in men with erectile dysfunction and the effect of randomised treatment withdrawal. Int J of Impotence Research, 2000. 12: p. 177-182.
28. Calandre, L., A. Hernandez-Lain, and E. Lopez-Valdez, Benign Valsalva's maneuver-related headaches: An MRI study of 6 cases. Headache, 1996. 36: p. 251-253.
29. Queiroz, L., Symptoms and therapies: Exertional and sexual headaches. Curr Pain Headache Rep, 2001. 5: p. 275-278.
30. Frese, A., et al., Triptans in orgasmic headache. Cephalalgia, 2006. 26: p. 1458-1461.
31. Heckmann, J., et al., Benign exertional headache/benign sexual headache: A disorder of myogenic cerebrovascular autoregulation? Headache, 1997. 37: p. 597-598.
32. Evers, S., et al., The cerebral hemodynamics of headache associated with sexual activity. Pain 2003. 102: p. 73-78.
33. Brilla, R. and S. Evers, A patient with orgasmic headaches converting to concurrent orgasmic and benign exertional headaches. Cephalalgia, 2005. 25: p. 1182-1183.
34. Goldstein, J., Sexual aspects of headache, keeping current in the treatment of headache. monograph series. 1985, New York: Ayerst Laboratories.
35. Lundberg, P. and P. Ostermann, The benign and malignant forms of orgasmic cephalgia. Headache, 1974. 13: p. 164-165.
36. Martinez, J., C. Roig, and A. Arboix, Complicated coital cephalalgia, three cases with benign evolution. Cephalalgia, 1988. 8: p. 265-268.
37. Edlow, J. and L. Caplan, Avoiding pitfalls in the diagnosis of subarachnoid haemorrhage. N Engl J Med, 2000. 342: p. 29-36.
38. Raps, E., et al., The clinical spectrum of unruptured intracranial aneurysms. Arch Neurol, 1993. 50: p. 265-268.
39. Dodick, D. and E. Wijdicks, Pituitary apoplexy presenting as a thunderclap headache. Neurology, 1998. 50: p. 1510-1511.
40. de Bruijn, S., J. Stam, and L. Kappelle, Thunderclap headache as first symptom of cerebral venous sinus thrombosis. CVST Study Group. Lancet, 1996. 348: p. 1623-1625.
41. Biousse, V., et al., Head pain in non-traumatic carotid artery dissection: a series of 65 patients. Cephalalgia, 1994. 14: p. 33-36.
42. Schievink, W., et al., Spontaneous intracranial hypotension mimicking aneurysmal subarachnoid haemorrhage. Neurosurgery, 2001. 48: p. 513-516.
43. SuttonBrown, M., W. Morrish, and D. Zochodne, Recurrent coital 'thunderclap' headache associated with ischaemic stroke. Cephalalgia, 2006.

26: p. 1028-1030.
44. Lance, J. and H. Hinterberger, Symptoms of phaeochromocytoma, with particular reference to headache, correlated with catecholamine production. Arch Neurol, 1976. 33: p. 281-288.
45. Frese, A., et al., eds. Prophylactic treatment and course of the disease in headache associated with sexual activity. Preventative Pharmacotherapy of Headache Disorders, ed. J.e.a. Olesen. 2004, Oxford University Press: Oxford. 50-54.
46. Vincent, F., Benign masturbatory cephalgia. Arch Neurology, 1982. 39: p. 673.
47. Chakravarty, A., Primary headaches associated with sexual activity - some observations in Indian patients. Cephalalgia, 2005. 26: p. 202-207.
48. Lance, J., When sex is a headache. BMJ, 1991. 303(27 July 1991): p. 202-203.
49. Turner, I. and T. Harding, Headache and Sexual Activity: A review. American Headache Society, 2008. Journal compilation: p. 1254-1256.
50. Evans, R. and J. Pascual, Orgasmic headaches: Clinical features, diagnosis and management. Headache, 2000. 40: p. 491-494.
51. Sands, G., Cough, exertional, and other miscellaneous headaches. Med Clin North Am, 1991. 75: p. 733-747.
52. Evers, S. and I. Husstedt, Alternatives in drug treatment of chronic paroxysmal hemicrania. Headache, 1996. 36: p. 429-432.
53. Nutt, N., Sexually induced headaches. Br Med J, 1977. 1: p. 1664.
54. Lewis, G., Orgasm headaches. J Indiana State Med Assoc, 1976. 69: p. 785-788.
55. Kim, J., Swimming headache followed by exertional and coital headaches. J Korean Med Sci, 1992. 7: p. 276-279