

# Primary headache associated with sexual activity

Anand K S, Dhikav V

## ABSTRACT

**A rare case of primary headache associated with sexual activity in a 40-year-old married Indian man who had coital and postcoital headaches responsive to indomethacin is reported.**

**Keywords: coital headache, postcoital headache, sex-related headache, sexual activity-associated headache**

*Singapore Med J 2009;50(5):e176-e177*

## INTRODUCTION

Primary headache with sexual activity (HSA) is known by several different names, e.g. benign coital headache, coital cephalgia, benign orgasmic cephalgia and sex-related headache. HSA is an acute headache that is time-related to sexual intercourse. Even though in ancient times, Hippocrates described a headache resulting from “immoderate venery” (cited by Adams in 1848), it was not until the 1970s that attention was drawn to a benign form of headache occurring during sexual activity. HSA is often confused with more serious conditions, such as subarachnoid haemorrhage due to ruptured intracranial aneurysm. Therefore, for patients in whom HSA occurs for the first time, appropriate radiological investigations should be done to exclude intracranial haemorrhage. Patients find it difficult to explain their problems to physicians, especially in conservative societies. It can not only be frightening and distressing but can also limit their sexual activity severely. Counselling and reassurance plays an important role in management, apart from pharmacological prevention, if and when needed.

## CASE REPORT

A 40-year-old Indian man, married for the last 12 years, presented with a history of severe headache during intercourse for the last four years. It was localised to both the temples and upper neck region. It used to start as a severe pain immediately following coitus, but was most intense at orgasm, and lasted for a few minutes initially. For the first three years, it occurred only during intercourse; however, for the last one year, it also remained after intercourse and lasted for a few hours. This resulted in marital discord as the patient avoided sexual activity due to pain. The headache was unresponsive to paracetamol and nimesulide. There were no associated

nausea, vomiting, dizziness, photophobia, visual, motor or sensory disturbance. He was a non-smoker, non-alcoholic, and had no personal or family history of migraine. He was a known case of coronary artery disease and hypertension and was receiving antihypertensive drugs (enalapril 5 mg/day) for the past two years. His general physical, systemic examination and routine investigations were unremarkable. Magnetic resonance angiography was normal. A diagnosis of primary HSA was made, and he was started on indomethacin 25 mg/day to be taken 30 minutes before intercourse, following which he noted a dramatic improvement. The average baseline frequency of such headaches was twice a week and the intensity of the headaches was eight on a 1–10 Likert numerical scale. The patient has been on regular follow-up once three-monthly for the past three years, and reported consistent improvement in both coital and postcoital headaches with indomethacin prophylaxis.

## DISCUSSION

Sex-related headaches are rare and only a few studies have investigated the epidemiological aspects. Lifetime prevalence is estimated to be 1% in a population-based study which is still only one of its kind.<sup>(1)</sup> Onset usually occurs in the latter part of the fourth decade of life, though some patients may experience it in their early 30s. HSA has been reported in both genders.<sup>(2)</sup> These are precipitated by masturbation or coitus and usually start as a dull, bilateral ache while sexual excitement increases, and suddenly becoming intense at orgasm. The headaches occur in bouts, last for weeks to months and may disappear on its own. There can be several attacks in one such bout. Headaches of this type generally occur in the absence of any intracranial disease or without associated symptoms such as nausea, vomiting, sensory or motor disturbances or unconsciousness.<sup>(3)</sup> The duration of pain ranges from a few minutes to 24 hours. Severe pain usually lasts for less than four hours. HSAs are, however, not always benign. Presentation of headache can mimic conditions such as subarachnoid haemorrhage, vascular thrombosis, hemispherical infarction, reversible sensory disturbances and homonymous hemianopia. Thus, they can be confused with “thunderclap” headaches that occur during coitus and signal a sudden intracranial event, such as subarachnoid haemorrhage.<sup>(4)</sup> The International Society of Headache (IHS) divides them into three types:

Department of  
Neurology,  
Dr Ram Manohar  
Lohia Hospital,  
Guru Gobind  
Singh-Indraprastha  
University,  
New Delhi 110001,  
India

Anand KS, DM,  
MNAMS, FICP  
Head

All India Institute  
of Medical Sciences,  
Ansari Nagar,  
Aubino Marg,  
New Delhi 110029,  
India

Dhikav V, MD  
Senior Research  
Officer

Correspondence to:  
Prof Kuljeet S Anand  
Tel: (91) 981 049 4019  
Fax: (91) 112 336 1164  
Email: kuljeet\_anand  
@rediffmail.com

Type 1 headaches refer to early coital cephalgia, which is usually moderate and of short duration; type 2 headaches are orgasmic coital cephalgia, which is abrupt, severe and lasts 15–20 minutes; and type 3 headaches are late coital cephalgia, which is of long duration (lasting hours to days) and occurs after orgasmic coital cephalgia.

The mechanism of HSA is mainly a trigeminal-vascular effect, but there is a definite muscular component. Muscular contraction plays a major role, especially in milder headaches that become more intense as the sexual excitement increases. Studies indicate that patients who experience type 2 headaches may have impaired cerebrovascular autoregulation. The cerebral vessels of these patients may dilate unpredictably in response to low pH as compared to normal healthy control. Some authors suggest that there is a possible link between type 2 headaches and migraines, and have postulated a release of catecholamines, neurokinins and serotonin during HSA. High blood pressure, pre-existing migraine and psychological factors are predisposing factors. HSA is more common in middle-aged hypertensive or obese males. One can differentiate the benign coital headache from more malignant causes such as subarachnoid haemorrhage. Isolated coital cephalgia is usually repetitive, unpredictable and episodic, while severe headaches lasting for more than 24 hours or are associated with a loss of consciousness are unlikely to be HSA.

Prognosis of HSA is good and should be explained to the patient. There is no treatment in the acute phase. As a preventive step, sexual activity could be stopped during the bout of headache, and a passive role can be

adopted during the sexual activity. Several drugs have been useful in the prophylaxis. In a study of various types of headaches, indomethacin (25–50 mg/day) or propranolol (40–200 mg/day) have been reported to be effective treatments.<sup>(5)</sup> However, drug treatment is required for cases with regular and frequent episodes.<sup>(4,6)</sup> Ergotamine (1–2 mg/day) or calcium channel blocker, diltiazem (60 mg TDS), have also been found to be helpful.<sup>(7)</sup> Prophylaxis can be advised for a period of three months and then the patient should be checked for spontaneous remission. For those with mild headaches, reassurance and advice about ceasing sexual activity is sufficient. Our case experienced two IHS categories: type 2 and type 3, and showed an excellent response with a treatment of indomethacin 25 mg/day taken before intercourse.

## REFERENCES

1. Rasmussen BK, Olesen J. Symptomatic and nonsymptomatic headaches in a general population. *Neurology* 1992; 42:1225-31.
2. Chakravarty A. Primary headaches associated with sexual activity--some observations in Indian patients. *Cephalalgia* 2006; 26:202-7.
3. Goadsby PJ, Lance JW. Miscellaneous headaches associated with functional or structural lesions. In: Olesen J, Tfelt-Hansen P, Welch KMA, eds. *The Headaches*. 2nd ed. Philadelphia: Lippincott Williams & Wilkins, 2000: 755-6.
4. Goldstein J. Sexual aspects of headache. How sexual function relates to headaches and their causes and treatment. *Postgrad Med* 2001; 109:81-4, 87-8, 92.
5. Sands GH, Newman L, Lipton R. Cough, exertional, and other miscellaneous headaches. *Med Clin North Am* 1991; 75:733-47.
6. Banerjee A. Coital emergencies. *Postgrad Med J* 1996; 72:653-6.
7. Akpunonu BE, Ahrens J. Sexual headaches: case report, review and treatment with calcium blocker. *Headache* 1991; 31:141-5.