



## CASE REPORT

# Primary headache associated with sexual activity: A case report

## Seksüel aktivite ile ilişkili primer baş ağrısı: Olgu sunumu

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### Summary

Headaches provoked by triggering factors have been recognized for many decades. In many cases, the development of such headaches is secondary to an underlying pathology. However, in some cases, no abnormality can be identified. Primary headache associated with sexual activity (PHASA) is one of the subgroups of primary headaches. PHASA is a benign form of headache and lifetime prevalence is estimated to be 1% to 1.6% in the general population. A 38-year-old man was admitted to outpatient clinic reporting history of severe headaches during sexual intercourse for the last 2 months. Headaches occurred bilaterally in occipital area just after orgasm and lasted for about 2 hours. Propranolol 40 mg/ day was initiated and on follow-up, patient reported dramatic improvement in 2 weeks. Treatment was maintained for 6 months. Patient has been on regular follow-up for a year and had no recurrence of headache. This is a rare case PHASA. In this patient, prophylactic treatment with low dosage of propranolol was successful.

Keywords: Headache; propranolol; sexual activity.

### Özet

Tetikleyici faktörlerle ortaya çıkan baş ağrıları on yıllardır bilinmektedir. Birçok hastada, bu tür baş ağrıları altta yatan bir patolojiye sekonder olarak gelişmektedir. Ancak, bazı hastalarda herhangi bir sorun tespit edilememektedir. Seksüel aktiviteyle ilişkili primer baş ağrısı (SAPB) primer baş ağrılarının bir alt grubudur. SAPB selim bir baş ağrısıdır ve genel popülasyonda yaşam boyu prevalansı %1–1.6'dır. Otuz sekiz yaşında erkek hasta, 2 aydır olan cinsel aktivite sırasında ortaya çıkan ciddi baş ağrısı nedeniyle polikliniğimize başvurdu. Ağrısı orgazm sonrası her iki oksipital bölgede ortaya çıkıyor ve yaklaşık 2 saatte sonlanıyordu. Hastaya 40 mg/gün propranolol başlandı ve 2 hafta içinde dramatik şekilde düzelleme bildirdi, tedaviye 6 ay devam edildi. Bir yıldır düzenli kontrollerine devam eden hastada yeniden baş ağrısı olmadı. Bu olguda nadir görülen SAPB ve düşük doz propranolol ile başarılı tedaviyi bildirmek istedik.

Anahtar sözcükler: Baş ağrısı; propranolol; seksüel aktivite.

### Introduction

Headaches provoked by triggering factors have been recognized for many decades.<sup>[1–3]</sup> In many cases, the development of such headaches is secondary to an underlying pathology.<sup>[4,5]</sup> However, in some cases, no abnormality can be identified. Primary headache associated with sexual activity (PHASA) is one of the subgroup of primary headaches. Firstly, in 1960s a benign form of headache during sexual activity was recognized.<sup>[6]</sup> PHASA is a benign form of headache and lifetime prevalence estimated to be 1–1.6% in the general population.<sup>[7,8]</sup> The mean age at onset usually occurs in the third or fourth decade of life. The aetiology remains unclear. That may be seen in both genders, and prognosis is good.<sup>[8,9]</sup>

Here, we report a patient with PHASA with a dramatic response to low dosage of propranolol.

### Case Report

A 38-year-old man was admitted to our outpatient clinic reporting a history of severe headache during sexual intercourse for the last 2 months. He had never had similar headaches in the past. He had a history of gastritis. He was experiencing headache bilaterally in occipital area just after orgasm and then it lasted about in 2 hours. There was no accompanying symptom such as nausea, vomiting, photophobia, phonophobia or osmophobia. The headache was unresponsive to analgesic drugs. Physical and

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neurologic examinations were unremarkable. Routine laboratory investigations were in normal range. Magnetic resonance imaging and magnetic resonance angiography were normal. He was diagnosed as primary PHASA. Indomethacin at an increasing dose, starting at 25 mg/day up to 100 mg/day, was prescribed, whereas there was no response and gastric symptoms were increased. Therefore, propranolol 40 mg/day was started, on follow up which he noted a dramatic improvement in two weeks, and treatment was maintained for six months. He has been on regular follow-up for a year, and his headache did not repeat.

## Discussion

We report a case of PHASA which is a rare primary headache. The diagnosis of PHASA requires the exclusion of secondary causes of headache. In our case, neurological, laboratory and brain imaging studies were all normal. In this report, we describe a patient with a PHASA, who showed a dramatic response to a prophylactic treatment with propranolol 40 mg/day.

The International Headache Society divides the PHASA into two subtypes: Type 1 (pre-orgasmic): a dull ache in the head and neck that occurs during sexual activity and increases with sexual excitement. Type 2 (orgasmic): sudden and severe, similar to thunderclap headache, which occurs at orgasm. Type 2 is the most common type of PHASA.<sup>[10,11]</sup> A diagnosis of type 2 PHASA was made for our patient.

The exact pathophysiology of PHASA is unknown. However, muscular component and impaired cerebrovascular autoregulation have been supposed to be related with PHASA.<sup>[8]</sup> In our case MRI and MRA have revealed no vasospasm neither any other pathologies.

Primary headaches associated with sexual activity has a male preponderance [4/1], the mean age at onset usually occurs in young people. The duration of the headache also varies from just a few minutes to hours. In most patients the pain is bilateral.

An association was suggested between sex-related headaches and migraine. This relationship is more frequent with type 2 with a prevalence of 25–47%.<sup>[9,12]</sup> Our patient did not have any other headache.

The course of PHASA is variable, sometimes occurring at regular intervals, and sometimes occurring sporadically. Ostergaard et al. followed the clinical course of 26 patients; some patients experienced only an isolated episode or a single cluster of sexual headaches, whereas others had several episodes.<sup>[13]</sup> Silbert et al. reported that in the majority of their patients headache disappeared without any treatment.<sup>[9]</sup>

With regard to treatment as a preventive step, indomethacin (25–100 mg/day), propranolol (40–240 mg/day), naratriptan (2.5 mg) have been reported to be effective.<sup>[9,11]</sup> It has been shown that good efficacy of short-term prophylaxis with indomethacin 25–100 mg 1–2 h before intercourse.<sup>[9,12]</sup> For long-term prophylaxis, beta-blockers (propranolol 120–240 mg/day, metoprolol 100–200 mg/day and diltiazem 180 mg/day) found to be effective approximately in 80% of the patients.<sup>[14]</sup> Prophylaxis can be sufficient for a period of 2–6 months because of spontaneous remission. In a patient, it was reported that single greater occipital nerve injection with steroid and local anaesthetic was effective.<sup>[15]</sup> Bandini et al. reported an excellent response to 50 mg/day topiramate in their patient with type 1 PHASA.<sup>[16]</sup>

## Conclusion

Primary headaches associated with sexual activity are rare conditions and usually have a benign self-limiting course. Once secondary causes have been excluded, the prognosis is good and should be explained to the patient.

This is a rare case of primary headache associated with sexual activity. In this patient, prophylactic treatment with low dosage of propranolol was successful.

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