



False-positive Basilar Artery Fenestration and Sexual Headache

Cinsel Aktivite Baş Ağrısı ve Yanlış Pozitif Baziller Arter Fenestrasyonu

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Dear Editor,

A right-handed 36-year-old man was referred to our hospital because of severe headache that first presented three months previously. Headache was localized bilaterally in the occipital region and exclusively triggered by sexual activity. The patient described the headache as dull, throbbing, and the onset was either before or at the moment of orgasm. The duration was 5 to 10 minutes. There were no accompanying symptoms, such as nausea, phono/photophobia and eye tearing. The headache was unresponsive to non-steroidal anti-inflammatory drugs. His physical and neurological examination was normal. Complete laboratory test including blood biochemistry, complete blood count, thyroid hormones were within the normal range. Brain magnetic resonance (MR) imaging revealed no abnormalities. Computed tomography angiography (CTA) showed a basilar artery fenestration (BAF) in the distal third with no aneurysm (Figure 1). For a further examination, digital subtraction angiography (DSA) was performed, which did not confirm the presence of BAF (Figure 2, 3). Indomethacin was instructed to be taken 30 min before intercourse. The patient did not come to subsequent follow-ups.

BA segmentation occurs at the fifth week of gestational age, when bilateral longitudinal neural arteries fail to fuse completely (1). Fenestration may happen because of failure of this fusion anywhere along the course of the BA but generally in the proximal portion (2). After the anterior communicating artery, BA is the second most common site of intracranial fenestration (2). The frequency of BAF was observed as 0.3%-0.6% in cerebral angiographies and 0.2%-0.5% in autopsy series (3). The advised approach in patients with asymptomatic BAF is to perform follow-

up CTA/MR angiography examinations. Advanced neuro-imaging should be performed in all patients with headache associated with sexual activity to exclude the possibility of aneurysm, especially in the presence of BAF. Our case highlights the importance of DSA when CTA was positive for BAF in patients with severe headache.

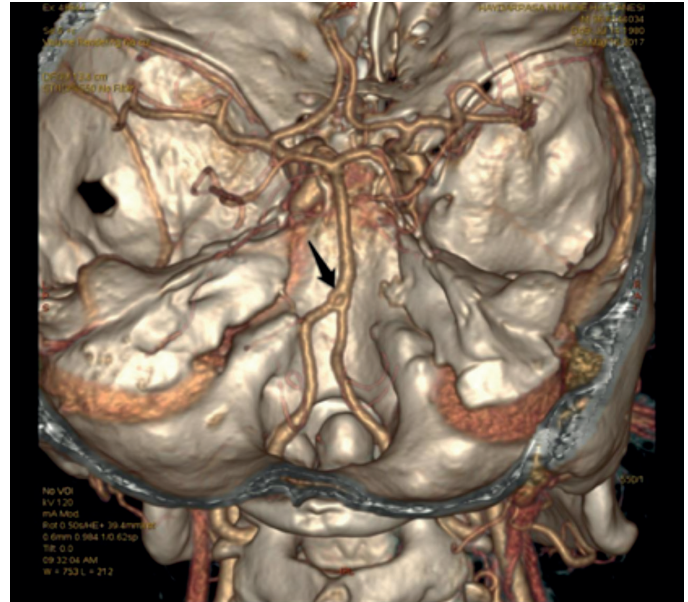


Figure 1. Computed tomography angiography showed a basilar artery fenestration at the distal third without any aneurysm.

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Figure 2. Digital subtraction angiography showed no vascular abnormality.

As a consequence of normal DSA results, the CTA diagnosis of BAF and the possibility of an aneurysm could be excluded. Therefore, the need for long-term neurovascular imaging follow-up was found to be unnecessary.

Ethics

Informed Consent: A consent form was completed by the participant.

Peer-review: Internally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: B.R.H.B., Concept: B.R.H.B., H.T., Design: B.R.H.B., I.A.T., Data Collection or Processing: B.R.H.B., Analysis or Interpretation: B.R.H.B., Y.C., Literature Search: B.R.H.B., Writing: B.R.H.B., K.T.



Figure 3. Digital subtraction angiography showed no vascular abnormality.

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References

1. Padget DH. The development of the cranial arteries in the human embryo. *Contr Embryol* 1948;32:205-261.
2. Giuffrè R, Sherkat S. The vertebral artery: developmental pathology. *J Neurosurg Sci* 1999;43:175-189.
3. Frese A, Eikermann A, Frese K, Schwaag S, Husstedt IW, Evers S. Headache associated with sexual activity. Demography, clinical features and comorbidity. *Neurology* 2003;61:796-800.