

LETTER TO THE EDITOR

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Hot water reflex epilepsy presenting as recurrent vomiting-like episodes in a child

Darshan Rajatadri Rangaswamy^{1*} and Niranjana Kamble¹

To the editor,

A male child aged seven years came to the clinic with complaints of experiencing episodes of vomiting-like symptoms when taking a bath for the last few months. The parents of the child observed that the child showed signs of retching and gagging, although he did not vomit. Interestingly, the child did not experience similar symptoms when swimming or while bathing in cold water. The parents sought medical attention, and the child underwent a thorough evaluation at multiple hospitals. Various treatments, including antiemetics, were administered, but none provided significant relief. Despite extensive evaluation, the underlying cause of the symptoms remained elusive. Later, the child presented to us, and given the unusual nature of the presentation, despite the absence of seizures, the possibility of a reflex epilepsy disorder, particularly hot water reflex epilepsy (HWE), was considered. Electroencephalography (EEG) was conducted, and the results were within normal limits, providing no definitive evidence of epileptic activity. Despite the inconclusive EEG findings, a trial of clobazam was initiated, aiming to control any potential epileptic activity that might be triggering the symptoms. Remarkably, within three days of starting the medication, the child experienced a complete cessation of symptoms associated with bathing. Subsequent bathing sessions were uneventful, with no recurrence of the vomiting-like episodes. The child remained symptom-free during follow-up appointments for almost a year.

Hot water reflex epilepsy (HWE) is a type of reflex epilepsy that is triggered by pouring hot water over the head (Hanci et al. 2020). Reflex epilepsy can be triggered by bathing, especially with significant changes in water temperature, leading to epileptic seizures, including those triggered by cold water (Sureshbabu et al. 2016). Recent evidence suggests a genetic link at chromosome 9p24.3-p23, chromosomes 10q12.3-q22.3 and 4q24-q28, with chromosome 4 having autosomal dominant patterns (Ratnapriya et al. 2009). They present with various semiology of seizures, with EEG showing epileptogenic activity in the temporal lobe, but most of the EEG results may be normal (Hanci et al. 2020). It is important to note that while vomiting can be a manifestation of a seizure, such as ictal nausea and vomiting that have been noted with temporal lobe epilepsy, it is not typically described as a sole manifestation of HWE in the absence of other seizure activity (Sekimoto et al. 2007). Though most cases of hot water epilepsy have a good prognosis, it is not a self-limiting condition and can develop into chronic epilepsy (Balgetir et al. 2022). HWE responds to treatment with antiepileptics like clobazam (Hanci et al. 2020). Recent evidence suggests a low response to antiepileptics in many cases, highlighting a different pathogenetic mechanism than other epilepsies (Sekimoto et al. 2007). Dramatic response to clobazam in our case and failure to identify other possible etiologies points towards HWE. The genetic testing was not done due to financial constraints.

*Correspondence:

Darshan Rajatadri Rangaswamy
rajatadri93@gmail.com

¹ Department of Pediatrics, Subbaiah Institute of Medical Sciences, Shimoga, Karnataka 577222, India

Abbreviations

EEG Electroencephalography
HWE Hot water epilepsy

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Author contributions

DRR analysed and interpreted the patient data, managed the case and contributed to writing the manuscript. NK analysed and interpreted the patient data and contributed to writing the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

Data will be shared on request.

Declarations**Ethics approval and consent to participate**

As per institutional policy, case reports do not need ethics approval; however, the committee was intimated regarding this submission.

Consent for publication

Written informed consent was obtained from the patient's parents/legal guardians to publish this case report. A copy of the written consent is available for the review by the Editor-in-Chief of this journal. Contact the author for the form.

Competing interests

The authors declare that they have no competing interests.

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