

## Visual evoked paroxysmal nausea and vomiting as disabling manifestations of multiple sclerosis

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### Abstract

Presentation of Multiple sclerosis is very wide. The rare manifestations and paroxysmal symptoms in multiple sclerosis are well described. We report a patient with clinically and radiologically definite multiple sclerosis whose first symptoms of the disease were paroxysmal nausea and vomiting triggered by visual perception of movement. Closure of her eyes or stopping of the movements led to termination of symptoms.

**Keywords:** Multiple sclerosis; Nausea; Vomiting; Area postrema

### Introduction

The protean manifestations and paroxysmal symptoms in multiple sclerosis are well described. We report a patient with clinically and radiologically definite multiple sclerosis whose first symptoms of the disease were paroxysmal nausea and vomiting triggered by visual perception of movement. Closure of her eyes or stopping of the movements led to termination of symptoms.

### Case presentation

A 26 year old unmarried female with the diagnosis of multiple sclerosis made in a private hospital was sent in our institute because of intractable paroxysmal nausea and vomiting. These symptoms were triggered by perception of any kind of movement in the patient's field of vision. The symptoms would begin abruptly with intense nausea and if the triggering movements persisted, vomiting would soon follow. Movement of any kind (people walking) would all lead to these symptoms. After getting pulse methyl prednisolone in the private hospital, these symptoms were temporarily suppressed, but reappeared after the acute therapy. She was also not getting relief by different antiemetics. MRI of brain was showing tiny hyperintense lesion occupying the posterior portion of the brainstem including the medulla (Figure 1). Although course of illness, symptoms and all the investigations were suggestive of multiple sclerosis, but she was more troubled by vertigo and vomiting which used to aggravate on opening eyes, especially on looking moving objects. Due to these symptoms, she preferred to remain on bed in dark room with eye closed [1].

### Discussion

It was the rare presentation of multiple sclerosis, so we reviewed the literature and ultimately got the answer from a case report by khan, *et al.* [2]. In our case also, MRI of brain was showing tiny hyperintense lesion occupying the posterior portion of the brainstem including the medulla (Figure 1). Most accepted explanation of paroxysmal symptoms in our case could be involvement of the vomiting centre and the chemoreceptor trigger zone in the area postrema. Involvement of the nucleus of the tractus solitarius could also lead to nausea and vomiting, as it is reciprocally connected to the area postrema [2].

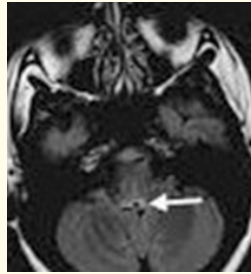
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Possible explanation was that the Retinal ganglion cells project to the primary visual cortex (Brodmann area 17) for visual perception. Efferents from the visual cortex project to the superior colliculus, which send efferents to the pontine and medullary reticular formation, and reticular formation being the site of the vomiting centre [3].

### Conclusion

The purpose of reporting the case is the unusual rare presentation. Paroxysmal vertigo may occur as a part of psychogenic disorders, but before labeling the symptom as psychogenic, one should always exclude other possibilities.



**Figure 1:** Axial FLAIR image demonstrating hyperintensity in the dorsal medullary region at the area postrema (arrow).

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