

2017

Isolated intractable nausea and vomiting with hiccups heralds a neuromyelitis optica area postrema syndrome

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This article was originally published as:

Lubomski, M., Lubomski, J., Tan, I., & Hayes, M. (2017). Isolated intractable nausea and vomiting with hiccups heralds a neuromyelitis optica area postrema syndrome. *Neurology and Clinical Neuroscience*, 6, 31-32.

Original article available here:

<https://dx.doi.org/10.1111/ncn3.12169>

This article is posted on ResearchOnline@ND at
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This is the peer reviewed version of the following article:

Lubomski, M., Lubomski, J., Tan, I., and Hayes, M. (2018) Isolated intractable nausea and vomiting with hiccups heralds a neuromyelitis optica area postrema syndrome. *Neurology and Clinical Neuroscience*, 6, 31-32. doi: 10.1111/ncn3.12169

This article has been published in final form at: -

<https://dx.doi.org/10.1111/ncn3.12169>

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MANUSCRIPT TITLE PAGE

Title:

Isolated intractable nausea and vomiting with hiccups heralds a neuromyelitis optica area postrema syndrome.

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Word Counts: Article: 100. References: 2. Figures: 1

Not Industry Sponsored. No sources of support. No conflicts of interest to declare.

Key Words:

Area postrema; Neuromyelitis optica; nausea and vomiting, hiccups

Title:

Isolated intractable nausea and vomiting with hiccups heralds a neuromyelitis optica area postrema syndrome.

Abstract:

Not applicable as submission is a Pictures in Neurology.

Manuscript:

A 23-year-old woman presented with intractable nausea, vomiting and hiccups over one-month, with no visual changes or features of myelitis. Extensive gastroenterological work-up was unremarkable. MRI brain and spine with gadolinium was normal aside from an isolated focal hyperintense T2/FLAIR signal with enhancement in the posterior inferior medulla oblongata, in the area postrema (Figure 1). Serum and CSF AQP4-IgG Abs were detected by immunofluorescence on a cell-based assay. The revised criteria for NMOSD (2015) accept AQP4-IgG antibody positivity coupled with an area postrema syndrome as diagnostic. [1] The latter requires MRI confirmation which is usually in the context of a longitudinal myelitis extending to the floor of the 4th ventricle and the area postrema. [1, 2] The diagnosis of NMO from an *isolated* area postrema syndrome has been infrequently reported. This presentation highlights the importance of clinicians recognising the distinct area postrema syndrome and considering neuro-inflammatory causes as differentials.

Conflicts of Interest/Disclosures:

The authors declare that they have no financial or other conflicts of interest in relation to this research and its publication.

Ethical considerations:

The patient had provided informed consent to the publication of her de-identified MRI scans. No ethics approval through an institutional committee on human research was required.

References:

1. Dubey D, Pittock SJ, Krecke KN, Flanagan EP. Association of Extension of Cervical Cord Lesion and Area Postrema Syndrome With Neuromyelitis Optica Spectrum Disorder. *JAMA neurology*. 2017;74(3):359-61.
2. Popescu BF, Lennon VA, Parisi JE, Howe CL, Weigand SD, Cabrera-Gomez JA, et al. Neuromyelitis optica unique area postrema lesions: nausea, vomiting, and pathogenic implications. *Neurology*. 2011;76(14):1229-37.

Figure Legends:

Figure 1: **A:** MRI Spine, T1 Sagittal and **B:** T1 Axial with gadolinium demonstrating isolated enhancement in the posterior inferior medulla oblongata, in the area postrema. **C:** MRI Brain, Axial FLAIR demonstrating an isolated focal hyperintense T2/FLAIR signal in the area postrema.

Figures:

Figure 1: **A:** MRI Spine, T1 Sagittal and **B:** T1 Axial with gadolinium demonstrating isolated enhancement in the posterior inferior medulla oblongata, in the area postrema. **C:** MRI Brain, Axial FLAIR demonstrating an isolated focal hyperintense T2/FLAIR signal in the area postrema.

