

Alexander's law in vestibular neuritis

Kiyoshi Shikino , Masatomi Ikusaka

General Medicine, Chiba University Hospital, Chiba, Japan

Correspondence to
Dr Kiyoshi Shikino;
kshikino@gmail.com

Accepted 1 October 2020

DESCRIPTION

A 21-year-old woman presented with acute onset vertigo and nausea. She had a prior episode of upper respiratory tract infection and no hearing loss. Physical examination revealed left-beating spontaneous nystagmus in primary gaze ([figure 1](#) and [video 1](#)). The nystagmus decreased in right gaze and increased in left gaze. Brain MRI was normal. Right vestibular neuritis was diagnosed and her symptoms improved on follow-up at 2 weeks later.

Acute vestibular syndrome is vertigo, nausea or vomit that appears acutely over seconds to hours and



Figure 1 Alexander's law in vestibular neuritis. The left-beating spontaneous nystagmus increased in gaze left and decreased in gaze right.



Video 1 Alexander's law in vestibular neuritis. Physical examination revealed the left-beating spontaneous nystagmus in primary gaze. The left-beating spontaneous nystagmus decreased in right gaze (affected) and increased in left gaze (intact side).¹

Learning points

- ▶ Acute vestibular syndrome is vertigo, nausea or vomit that appears acutely over seconds to hours and lasts for days to weeks.
- ▶ It is important to distinguish between peripheral vertigo, such as vestibular neuritis and central vertigo, such as cerebellar infarction.
- ▶ Alexander's law refers to spontaneous nystagmus that occurs after an acute unilateral vestibular loss.

lasts for days to weeks.¹ It is important to distinguish between peripheral vertigo such as vestibular neuritis and central vertigo such as cerebellar infarction.¹ Alexander's law refers to spontaneous nystagmus that occurs after an acute unilateral vestibular loss. In the case of peripheral nystagmus, intensity of nystagmus is enhanced when staring in the direction of fast-phase otherwise reduced when staring at the opposite side of the fast-phase.²

Twitter Kiyoshi Shikino @K

Contributors KS cared for the patient and wrote the report. KS and MI read and approved the final version of the report.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

ORCID iD

Kiyoshi Shikino <http://orcid.org/0000-0002-3721-3443>

REFERENCES

- 1 Tsang BKT, Chen ASK, Paine M. Acute evaluation of the acute vestibular syndrome: differentiating posterior circulation stroke from acute peripheral vestibulopathies. *Intern Med J* 2017;47:1352–60.
- 2 Robinson DA, Zee DS, Hain TC, *et al*. Alexander's law: its behavior and origin in the human vestibulo-ocular reflex. *Ann Neurol* 1984;16:714–22.



© BMJ Publishing Group Limited 2021. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Shikino K, Ikusaka M. *BMJ Case Rep* 2021;14:e239705. doi:10.1136/bcr-2020-239705

Copyright 2021 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <https://www.bmj.com/company/products-services/rights-and-licensing/permissions/>
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- ▶ Submit as many cases as you like
- ▶ Enjoy fast sympathetic peer review and rapid publication of accepted articles
- ▶ Access all the published articles
- ▶ Re-use any of the published material for personal use and teaching without further permission

Customer Service

If you have any further queries about your subscription, please contact our customer services team on +44 (0) 207111 1105 or via email at support@bmj.com.

Visit casereports.bmj.com for more articles like this and to become a Fellow