

Vertigo with Migraine: A Diagnostic Challenge.

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Abstract: Migraine and vertigo are both common disorders and therefore both may coexist, just by chance. However a entity called migrainous vertigo or migraine associated vertigo is being increasingly recognized. We here present a case of a 28 years old lady with history of recurrent episodic vertigo since last 3 years and migrainous headaches since last 5 years. She was suspected as a case of migrainous vertigo and started on treatment with flunarizine 10 mg HS, following which both her headaches and vertigo responded. Treatment was slowly tapered off in 4 months and there after she was followed up for 6 months. In these 10 months her headaches and vertigo have not recurred.

INTRODUCTION

A strong association exists between migraine and vertigo. When recurrent vertigo attacks begin at an early age in patient with normal hearing and migraine, there are few other diagnoses other than migrainous vertigo that need to be considered¹. Neuro-otological manifestations of acute MV are heterogeneous. Few patients show spontaneous nystagmus indicative of central vestibular dysfunction. In cases with predominantly torsional spontaneous nystagmus, a dysfunction of the vestibular nuclei at the pontomedullary junction or midbrain is most likely, while downbeating nystagmus indicates dysfunction of the vestibulocerebellum or underlying medulla and upbeating nystagmus is commonly reported with midline medullary lesions. Positional nystagmus of a central type has been reported in posterior fossa lesions adjacent to the fourth ventricle presumably involving an inhibitory loop between midline archicerebellar structures and the vestibular nuclei. In contrast few patients with predominantly horizontal spontaneous nystagmus and contralateral semicircular canal paresis point to acute peripheral vestibular dysfunction^{1,3}. There usually is no temporal relationship between migraine and vertigo attacks. A marked female preponderance has been recognized⁶. There is a possible casual relationship and its has been postulated that a migrainous aseptic inflammation probably creates a central sensitivity that spreads from trigeminal to the vestibular system⁷. Treatment of MV currently parallels that of migraine headache, as proper studies of optimal MV management are just beginning⁷. Studies have shown topiramate to be effective in reducing the frequency and the severity of vertigo and headache attacks. The 50 mg/day dose seems to be appropriate as higher adverse effects were noted when 100 mg/day was used². As for the acute attacks, several case reports have revealed variable treatment options. One study has revealed usefulness of intravenous methylprednisolone in abating the acute attacks⁸. Patients of MV usually have an attenuated or absent headache with their vertigo as compared with their usual headache of migraine. It has been reported that patients of MV when given triptans suffered induction or exacerbation of headache with disappearance of vertigo, which may suggest that headache and vertigo of migraine may be inversely related to each other and suppression of one may induce or aggravate the other⁴.

CASE

We present a case of a 28 years old lady with history of episodic rotational vertigo, lasting few days, occurring at least once in six months since last 3 years. There was no history of tinnitus or subjective hearing impairment during the attacks of vertigo. She had motion induced dizziness since childhood. Since the age of 23 years she also had a history of episodic unilateral throbbing headaches association

with nausea and occasionally vomitings, photo and phonophobia and sometimes dizziness. The attacks occurred once in 15-20 days. No specific triggers had been identified. She had been diagnosed as a case of migraine without aura but was not on any prophylactic treatment for the same at the time of our evaluation. She was advised sumatriptan 25 mg tablet whenever headache occurred. No history of head trauma. On examination at the time of vertigo, she had normal hearing, Rinne's and Weber test and no evidence of positional nystagmus. She underwent routine and otoneurological investigations including CBE, ESE, CRP, pure tone audiometry, brainstem audiometry evoked response, electronystagmography and MRI brain. All investigations were normal.

She was managed with betahistine and cinnarizine for the episode of vertigo and advised diclofenac 50 mg and domperidone 10 mg whenever headache or nausea occurred. She was started on flunarizine 10 mg at night which she tolerated well except a 3 kg weight gain during the four months of treatment for which she was advised lifestyle modification measures. She was being followed up for six months thereafter during which she had no episode of vertigo and just one episode of headache which occurred during the second month of prophylaxis.

CONCLUSION

Migrainous vertigo should be considered in any young patient with history of migraine and vertigo⁶ it responds well to prophylactic treatment of migraine, so could be worthwhile to keep a high degree of suspicion and start one of them⁶.

REFERENCES

1. Michael Von Brevern, Daniel Zeise, Hannelore Neuhauser, Andrew H. Clarke and Thomas Lempert. Acute migrainous vertigo: clinical and oculographic finding *Brain* (2005) 128 (2): 365-374. doi: 10.1093/brain/awh351
2. Gode S, Celebisoy N, Kirazli T, Akyuz A, Bilgen C, Karapolat H, Sirin H, Gokcay F. Headache. Clinical assessment of topiramate therapy in patients with migrainous vertigo. 2010 Jan;50(1):77-84. Epub 2009 Jul 27
3. Oh SY, Seo MW, Kim YH, Choi KD, Kim DS, Shin BS. Gaze-evoked and rebound nystagmus in a case of migrainous vertigo. *J Neuroophthalmol*. 2009 Mar;29(1):26-8
4. Prakash S, Chavda BV, Mandalia H, Dhawan R, Padmanabhan D. Headaches related to triptans therapy in patients of migrainous vertigo. *J Headache Pain*. 2008 Jun;9(3):185-8.
5. Brantberg K et al. Migraine associated vertigo. *Acta Otolaryngol* 2005 Mar;125(3):276-9
6. Crevits L et al. Migraine related vertigo: towards a distinctive entity. *Clin Neuro Neurosurg*, 2005 Feb; 107 (2):82-7
7. Eggers SD. Migraine related vertigo: diagnosis and treatment. *Curr Neurol Neurosci Rep*. 2006 Mar;6 (2): 106-15
8. Prakash S, Shah ND. Migrainous vertigo responsive to intravenous methylprednisolone: case reports. *Headache*. 2009 Sep;49 (8):1235-9. Epub 2009 Jun 22.

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