

5<sup>th</sup> International Conference on

## OTORHINOLARYNGOLOGY

August 07-08, 2017 London, UK

## Paroxysmal vertigo with nystagmus in children

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**Introduction & Aim:** Pathological nystagmus is an objective sign that a patient feels vertigo. However, there have been few opportunities to observe and record pathological nystagmus during a paroxysmal vertigo attack. Furthermore, it can be difficult to obtain cooperation in pediatric patients. We present two cases of paroxysmal vertigo in children in whom we successfully recorded and analyzed their pathological nystagmus during a vertigo attack.

**Methods:** Of a total sample of 4349 patients seen at our hospital for dizziness in the last decade, a retrospective analysis revealed that 68 were children (<15 years old; 1.6%). Of these 68 children, we successfully identified pathological nystagmus during paroxysmal vertigo in only two (2.9%).

**Results:** Case 1 was a four-year-old girl. She felt vertigo the strongest when her left ear was down in the supine position. We observed and recorded her nystagmus during a vertigo attack with her mother's permission. Her positional nystagmus in the supine position was horizontal persistent apogeotropic nystagmus. Rightward nystagmus in the left-ear-down supine position was stronger than leftward nystagmus in the right-ear-down supine position. Therefore, the diagnosis was right lateral canal type of benign paroxysmal positional vertigo, of which the pathophysiology was cupulolithiasis. The other patient was an 11-year-old boy. He had a family history of migraines. His vertigo attacks occurred after onset of a severe migraine and lasted between 2–48 h. During an attack that we observed, he showed nystagmus, which was direction-fixed right torsional and rightward in darkness. His mother had noticed that his eyes moved abnormally and that his left eye did not shift to the left side when he looked leftward. He was old enough to clearly express his own symptoms. Other neurological examinations were normal. The diagnosis was vestibular migraine.

**Conclusions:** We analyzed a pathological nystagmus during paroxysmal vertigo in two children. We conclude that children can be diagnosed with a combination of careful history taking and accurate examinations of a pathological nystagmus.

## **Biography**

Angelica Lynch, prevocational doctor, post graduate year 5 with a passion for ENT. Hails for Brisbane, Australia and undertook studies on the Gold Coast. Currently involved in the world of academia in order to improve her researcher capabilities and allow her to secure a position on the Australian ENT surgical training program with a hope to start training in 2019.

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