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## Alice in wonderland syndrome: Case report

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### Abstract

Alice In Wonderland Syndrome (AIWS) is a syndrome characterized by visual distortions, like seeing objects or body images as being larger than normal (macropsia), smaller than normal (micropsia), longer or shorter than normal, or thinner or thicker than normal, and by perception disorders, like seeing things as being farther than normal (teleopsia) or closer than normal (pelopsia), and by visual hallucinations. In 1952, Lippman diagnosed these distortions in body images in seven migraine patients. Todd designated this syndrome as AIWS in 1955. It has been reported in migraine, complex partial seizure, infectious mononucleosis, and non-specific hyperprexia cases.

**Keywords:** alice in wonderland syndrome, visual distortions, macropsia

### Introduction

Alice In Wonderland Syndrome (AIWS) is a syndrome characterized by visual distortions (metamorphopsia), like seeing objects or body images as being larger than normal (macropsia), smaller than normal (micropsia), longer or shorter than normal, or thinner or thicker than normal, and by perception disorders, like seeing things as being farther than normal (teleopsia) or closer than normal (pelopsia), and by visual hallucinations. In 1952, Lippman diagnosed these distortions in body images in seven migraine patients. Todd designated this syndrome as AIWS in 1955. It has been reported in migraine, complex partial seizure, infectious mononucleosis, and non-specific hyperprexia cases.

### Case description

A 30-year-old male patient applied to our clinic with a complaint of long-term headache episodes. The patient presented with a pulsating headache on the left side of his head which had lasted for approximately 24 hours and usually occurred once a week in the form of attacks. During his headaches, nausea was accompanied with photophobia and phonophobia. The patient stated that the objects around him appeared to be larger than they actually were, that his fingers appeared to be smaller than they actually were, and that he noticed deformations in the objects around him. Headache started after approximately 30 minutes after these symptoms. These auras are not seen in every attack. He had seen this visual phenomenon for about 1 year. He reported that all these visual distortions would continue for almost half an hour. Besides his mother's and sister's history of migraines, there were no significant characteristics in the patient's background. His psychiatric examination was normal, Results from the neurological and systemic examination of the patient were normal, and his blood test results were at normal limits. No pathologies were detected in the brain magnetic resonance imaging (MRI) and the electroencephalography (EEG) that were taken. Two of them were normally. The patient was administered 500 mg/day of valporic acid. Complaints improved, but repeated. During follow-ups, valporic acid was increased to 1000 mg/day, and the complaints of the patient were completely eliminated.

### Discussion

Migraine with aura occurs either as an isolated episode or together with attacks of migraine without aura in 10% of all migraines. Migraine with aura is a primary headache, where reversible focal neurological symptoms develop over 5-10 minutes, last for less than 60

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minutes and manifest with recurrent attacks. The type of migraine with aura varies depending on migraine sub-groups, but the auras can involve visual symptoms (lights, spots, lines, blurred vision, etc.), sensory symptoms (numbness, pricking, etc.), motor weaknesses and speech disorders. This syndrome characterized by visual distortions (metamorphopsia), such as seeing objects or body images as being larger than normal (macropsia), smaller than normal (micropsia), longer or shorter than normal, or thinner or thicker than normal, by perception distortions, such as seeing things as being farther away than they really are (teleopsia) or closer than they really are (pelopsia), and by visual hallucinations. The headache experienced by our subject was migraine with aura, which involved two major symptoms, namely, pain that lasted for almost 24 hours and a period of aura that lasted for half an hour. These symptoms, specifically, the macropsia, micropsia and metamorphopsia described by the patient, are consistent with AIWS. In epilepsy, schizophrenia, intoxication-induced migraine, EBV infections, and other central nervous system infections, AIWS is associated with the use of hallucinogenic drugs and hyperprexy. In our case, there was no history of psychiatric disorder, hallucinogenic drug use or central nervous system infection, the patient had no pathologies in his EEG, and the AIWS was not associated with migraine. AIWS can be seen in temporo-occipital or temporo-partial-occipital lesions. Our case had no pathologies in the brain MRI.

### Conclusion

"Alice in Wonderland" syndrome and "Alice in Wonderland"-like syndrome typically affect young children, and the most common visual complaints are micropsia and teleopsia. The most common associated condition is infection.

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