

Visual snow syndrome in an adolescent girl

Shinji Makino

Department of Ophthalmology, Jichi Medical University, Shimotsuke, Tochigi, Japan

*Corresponding author

Shinji Makino

Email: makichan@jichi.ac.jp

Abstract: We describe a case of a 14-year-old girl who had a persistent visual disturbance. She developed a constant “rain-like” pattern in front of both eyes since at the age of 8 years. These consist of white, bright, and jagged spots. Therefore, she had felt as blurred the outline of objects. In addition, she had sometimes felt a headache and tinnitus. Ophthalmological examinations were unremarkable. Initially, she was puzzled and believed that these conditions were part of the process of mental illness as visual hallucination. She was given explanation that her visual symptoms could be well understood as “visual snow”, and she was reassured that she had no mental illness. Although there was no improvement in her visual symptoms, she has been able to cope with the visual snow. We consider that an appropriate support and reassurance should be offered to those who cannot cope with their visual symptoms in patients with visual snow syndrome.

Keywords: visual snow, positive persistent visual symptoms.

INTRODUCTION

“Visual snow” refers to the persistent visual experience of flickering fine achromatic dots or static in the whole visual field of both eyes likened to “static analogue television noise” [1-7]. The symptom frequently occurs with other visual symptoms such as photopsia, nyctalopia, palinopsia (the persistence of previously viewed stimuli) and entoptic phenomena, as well as other disorders of sensory perception such as migraine with or without aura, tinnitus and tremor [2-6]. Recently, Schankin *et al.* suggested that “visual snow” is a unique clinical syndrome, distinct from migraine with aura, and recommended set diagnostic criteria to help identify “visual snow” [2]. We present a case of visual snow syndrome in a 14-year-old girl.

CASE REPORT

A 14-year-old girl had a 6-year history of persistent visual disturbance. She developed a constant “rain-like” pattern in front of both eyes since at the age of 8 years. Despite variation in intensity and manifestation, the visual symptoms have been continuous. These consist of white, bright, and jagged spots. Therefore, she had felt as blurred the outline of objects. In addition, she had sometimes felt a headache and tinnitus. On ophthalmological examination, her best corrected visual acuity was 1.2 in both eyes. Both anterior segments and fundus examination were normal. The findings of physical examinations were unremarkable. She had no previous history of mental illness. Therefore, the patient was diagnosed with visual snow syndrome. Initially, she was puzzled and believed that these conditions were part of the process of mental illness as visual hallucination. She was given

explanation that her visual symptoms could be well understood as “visual snow”, and she was reassured that she had no mental illness. Although there was no improvement in her visual symptoms, she has been able to cope with the visual snow. Magnetic resonance imaging and electroencephalograph were not available in this case.

DISCUSSION

“Visual snow” is a disabling disorder with patients complaining about TV-snow-like tiny flickering dots in the entire visual field. The symptoms can be continuous and might persist over years. In a recent study, almost all patients with visual snow had additional visual symptoms, such as palinopsia, entopic phenomena (floaters, blue field entopic phenomenon, and others), nyctalopia, photophobia, and tinnitus suggesting that visual snow is likely a clinical syndrome [2]. Schankin *et al.*; [2] also reported that 59% of the patients had a history of migraines, 87% had a history of headaches, and 36% described symptoms starting directly after a migraine. Based in part on these diagnostic criteria [2], the present patient was diagnosed as having visual snow syndrome.

Some patients find ways of controlling their visual symptoms or of distinguishing between a real sight and visual snow. However, the question arising from the high prevalence of these symptoms in patients with visual snow is probably, why these phenomena are not present in everybody, and the hypothetical consequence would be that a mechanism suppressing these phenomena in healthy individuals might be dysfunctional in patients with visual snow. Although

this patient had some emotional distress caused by visual snow, she was given explanations that she had no mental illness, and reassured that the problem could be reduced. We consider that pediatric cases of visual snow syndrome are extremely important. Although this case lacks novel findings, we emphasize that an appropriate support and reassurance should be offered to those who cannot cope with their visual symptoms in patients with visual snow syndrome.

DISCLOSURE

The author declares that he has no conflicts of interest in the preparation of this report.

REFERENCES

1. Liu GT, Schatz NJ, Galetta SL, Volpe NJ, Skobieranda F, Kosmorsky GS; Persistent positive visual phenomena in migraine. *Neurology*. 1995; 45(4):664-668.
2. Schankin CJ, Maniyar FH, Digre KB, Goadsby PJ; 'Visual snow' - a disorder distinct from persistent migraine aura. *Brain*. 2014; 137(Pt 5):1419-1428.
3. Schankin CJ, Maniyar FH, Sprenger T, Chou DE, Eller M, Goadsby PJ; The relation between migraine, typical migraine aura and "visual snow". *Headache*. 2014; 54(6):957-966.
4. Schankin CJ, Goadsby PJ; Visual snow-persistent positive visual phenomenon distinct from migraine aura. *Curr Pain Headache Rep*. 2015; 19(6):23.
5. Gersztenkorn D, Lee AG; Palinopsia revamped: a systematic review of the literature. *Surv Ophthalmol*. 2015; 60(1):1-35.
6. Lauschke JL, Plant GT, Fraser CL; Visual snow: A thalamocortical dysrhythmia of the visual pathway? *J Clin Neurosci*. 2016; 28:123-127.
7. Simpson JC, Goadsby PJ, Prabhakar P; Positive persistent visual symptoms (visual snow) presenting as a migraine variant in a 12-year-old girl. *Pediatr Neurol*. 2013; 49(5):361-363.