

A case of psychogenic visual disturbance improved by staying at home after the declaration of a state of emergency in relation to the coronavirus disease

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ABSTRACT

The aim of this study is to report a 7-year-old girl with psychogenic visual disturbance that improved upon staying at home after the declaration of a state of emergency in relation to Coronavirus disease. Her uncorrected visual acuity (UCVA) in the right eye was 0.4 and in the left eye was 0.3. Slit-lamp examination and fundoscopy showed no abnormalities. She had a tight schedule on six days a week due to various lessons. To prevent the spread of infection, her school was closed, and she was not able to attend any lessons. She enjoyed spending time at home. Six months after her initial visit during school closure, her UCVA had improved to 1.2. The situation of staying at home may have had a positive psychological effect after removing factors contributing to her stress.

Keywords: Coronavirus disease (COVID-19), psychogenic visual disturbance, state of emergency, staying at home

Introduction

Coronavirus disease (COVID-19) is changing children's lives. Currently, the psychological and mental health impacts of the COVID-19 epidemic have been reported.^[1-8]

Visual complaints without evidence of contributory ocular or non-ocular pathologies are called "psychogenic," "functional," or "non-organic" visual disturbances.^[9-13] Psychogenic visual disturbances occur in both adults and children but are more common in teenagers. Generally, they are related to environmental stress, such as family tribulations and school difficulty.

Here, we present a case of a 7-year-old girl with psychogenic visual disturbance that improved upon staying at home

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after the declaration of a state of emergency in relation to COVID-19.

Case History

A 7-year-old girl was referred to our clinic because of painless vision loss. According to her parents, she initially complained of vision loss after having difficulty in reading the classroom board during the middle of the first trimester of her first-grade school year. She was prescribed eyeglasses by a physician six months before her first visit to our clinic. Her medical and personal histories were unremarkable, and her physical examination revealed no abnormalities. Upon ophthalmic examination, uncorrected visual acuity (UCVA) in her right eye (OD) was 0.4 and in her left eye (OS) was 0.3. Best-corrected visual acuities (BCVA) were 0.9 with +0.50 D OD and 0.7 with +0.25 D OS. Slit-lamp examination and fundoscopy showed no abnormalities. One week after the initial visit, she underwent cycloplegic refraction after the application of

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cyclopentolate hydrochloride. The cycloplegic refractive error was +1.25 D/-0.25 D 100 OD and +1.25 D/0.25 D 95 OS. UCVA and BCVA were 0.3 in both eyes. Therefore, we advised her that wearing glasses was not necessary. Two months after the initial visit, she complained that she had a headache since she stopped wearing glasses. Although she also complained that the board was easier to read when wearing glasses, UCVA and BCVA were 0.3 in both eyes. The accommodometer showed a mild accommodative spasm. Therefore, we presumed that the etiology was functional, and the patient was diagnosed with psychogenic visual disturbance.

On February 27, 2020, the Government of Japan strongly recommended that all elementary schools, junior high schools, senior high schools, and schools for special needs education close temporarily from March 2, 2020, until spring break. This was done from the standpoint of mitigating the risk of infection associated with allowing children, teachers, and school staff to stay together for long hours every day. In Miyazaki city where the patient lives, elementary schools were closed from March 2, 2020. At the same time, it was declared that the “Three Cs”: “Closed spaces with poor ventilation,” “Crowded places with many people nearby,” and “Close-contact settings such as close-range conversations” be avoided. The Government of Japan then declared a nationwide state of emergency in relation to COVID-19 on April 7, 2020.

The patient was attending an abacus class, gymnastics class, and softball lessons; thus, she had a tight schedule on 6 days a week except on Monday. To prevent the spread of infection, her school was closed, and therefore she was not able to attend any classes. Her family comprised her parents, grandparents, and sister. Since her parents were dual workers, she enjoyed spending time with her grandparents and sister while her school was closed.

Six months after her initial visit during school closure, her headache had completely disappeared and her UCVA had improved to 1.2 in both eyes. On May 14, 2020, the emergency declaration was lifted. Fortunately, the patient had maintained good visual function.

Discussion

In this study, we report a case of psychogenic visual disturbance improved by staying at home after the declaration of a state of emergency in relation to COVID-19.

In previous reports, the occurrence of psychogenic visual disturbance has been associated with environmental stressors, such as family and school problems, psychological difficulties, and preexisting physical illnesses.^[9-13] Problems in the family include parental psychiatric or severe physical disease, death of a relative, parental separation/divorce, sibling birth or jealousy, strict parents, and adoptions. Psychologic problems include poor self-esteem, difficulty in peer socialization, mood disorders, binge eating disorders, and behavioral disorders. Problems at school

include bullying and relationships with homeroom teachers. Generally, most cases with psychogenic visual disturbance resolve in response to appropriate suggestions or reassurance given to alleviate environmental stress.^[9-13]

The COVID-19 epidemic has major impacts not only on infected people but also on those who are uninfected. Psychological effects on the mental health of children have been especially reported during this time.^[1-8] During the initial phase of the COVID-19 outbreak in China, more than half of the respondents rated the psychological impact as moderate-to-severe, and about one-third reported moderate-to-severe anxiety.^[1] The female sex, student status, and specific physical symptoms were associated with a greater psychological impact and higher levels of stress, anxiety, and depression.^[1] In the course of negative events, children are often forced to stay at home for long periods due to enforced isolation and school closure, resulting in limited connections with classmates and reduced physical activity.^[2]

We speculated that psychological effects on children were increased during the COVID-19 epidemic, leading to psychogenic visual impairment in children who are susceptible to psychological stress. In this case, the patient had no problems at school and home, allowing us to speculate that her visual function improved because of being mentally freed from her tight schedule. Thus, the situation of staying at home may have had a positive psychological effect after removing factors contributing to her stress.

Although our findings were based on a single ophthalmic case, we emphasize that primary care clinicians should be aware of the potential for psychological visual disturbance in present unprecedented situations.

Key Messages

We present a case of psychogenic visual disturbance that improved upon staying at home after the declaration of a state of emergency in relation to Coronavirus disease. The present case indicates that the situation of staying at home may have had a positive psychological effect after removing factors contributing to her stress.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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