

CASE REPORT

Alice in Wonderland Syndrome Similar Visual Disturbance Two Weeks after SARS-CoV-2 Infection in a 5-year-old Boy

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INTRODUCTION

COVID-19 is a notifiable infectious disease [1-7]. It is caused by the coronavirus SARS-CoV-2 and has a broad, nonspecific spectrum of symptoms. The virus was first described in Wuhan, People's Republic of China, in December 2019. It spread very rapidly worldwide and is the cause of the COVID-19 pandemic. By January 31, 2022, more than 373 million COVID-infected people were registered worldwide, but a high number of unreported cases is suspected in many countries. More than 5.6 million people have been registered as deaths related to COVID disease; again, the number of unreported cases is high. Infection with SARS-CoV-2 occurs through droplet infection (inhalation of virus-laden aerosols) - especially when staying in closed and insufficiently ventilated rooms. The Robert Koch Institute (RKI) has not ruled out the possibility of smear infection through contaminated surfaces. To avoid infection, spatial distancing ("social distancing"), contact restriction, wearing a protective medical mask, and hygiene measures are recommended. There is much evidence to suggest that the spread of COVID-19 to the global pandemic was facilitated in particular by "superspreading." The incubation period of COVID-19 averages five to six days; however, up to two weeks can elapse between infection and the appearance of the first symptoms. Occasionally, the first symptoms appear within 24 hours of infection. It is particularly insidious that an infected person can be infectious (contagious) days before the first symptoms appear, and even after they have subsided. The course of the disease is nonspecific and can vary greatly. According to the estimate of the RKI, 55 to 85% of infected persons have noticeable symptoms and/or show recognizable signs of disease (symptoms) or typical symptom combinations (syndrome) of a COVID-19 disease (manifestation index). The remaining infected persons are symptom-free and show no symptoms; they are asymptotically ill, but can still spread the virus. About 81% of registered cases have a mild course with fever or mild pneumonia, dry cough, and fatigue. Less common are a stuffy nose, headache, sore throat, aching limbs, conjunctivitis, diarrhea, vomiting, loss of taste and smell, skin rash, or discoloration of fingers or toes. In about 14% of cases, the course is more severe, and in about 5% it is so severe that patients must be ventilated in an intensive care unit. In a severe

course of COVID-19, bilateral pneumonia and acute respiratory failure occur; affected individuals may die. Pathological processes of the liver, central nervous system, kidneys, blood vessels, and heart have also been observed.

CASE REPORT

We report of a 5-year-old boy, who developed Alice in Wonderland like seizures in form of telopsia of the arms and legs 2 weeks after COVID-19 infection diagnosed by PCR-testing. Time distortion could not exactly ruled out due to the early age of the child [2,3]. Two weeks after COVID-19 infection, the boy developed telopsia and saw objects far away. The episodes last about once a day with a time duration of 10 minutes - 30 minutes. The child had no migraine episodes, nor any familial members with migraine. Till date of seizures, the child was never been ill and never took drugs or pharmaceutical medication. No familial member had any of these curious visual disturbance before. To date of this publication, the episodes still not quit. The family attended to a pediatric neurologist for further work-up.

DISCUSSION

Alice in Wonderland syndrome results in changes in the perception of one's surroundings. These changes include both micropsia and macropsia (everything appears reduced or enlarged), as well as altered auditory perception, altered tactile perception, and altered sense of time [1-7]. The syndrome is particularly common in children. Attacks are often shorter and may also be completely painless, although accompanying symptoms such as nausea, vomiting, and sensitivity to light and sound are more pronounced. Neurological deficits may occur, so that the affected child begins to hallucinate [1-7]. He or she perceives his or her body as larger or smaller and/or begins to see "fantastic images." The changes in perception can severely affect affected individuals, causing them to become disoriented and "unable to find their way around." In extreme cases, falls and other accidents may occur. The perceptual disturbances can cause Alice in Wonderland syndrome to be confused with other mental disorders or misinterpreted as "craziness". Since a few months, cases of Alice in Wonderland syndrome seem to be more present and obvious especially after COVID-19 infection in children. Since a few months, Facebook groups discuss an upcoming degree of parents, who are concerned about their children with Alice in Wonderland like seizures after COVID-19 infection. This case report focusses on this new relation between the new coronavirus disease and Alice in Wonderland like features in 5-year-old boy 2 weeks after COVID-19 infection, so coronavirus could act as a trigger in AIWS in childhood and should be closer evaluated by further cases. Is COVID-19 a Trigger of Alice in Wonderland Syndrome?.

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