

The signs of our times: the appearance of covid-19 related delusions, a case report

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Case report

Abstract

Since the declaration of the pandemic, patients with serious mental disorders are at higher risk of worsening psychiatric symptoms and relapse. In this case report we present a Greek psychotic patient whose inner life changed dramatically, trying to explain his abnormal experiences in the midst of a pandemic, with the covid-19 virus taking centre stage in his delusional statements.

Key words: Covid-19, psychosis, delusions.

Introduction

Widespread outbreaks of infectious diseases, such as COVID-19, are associated with adverse mental health consequences [1]. People with preexisting mental health conditions, given their increased vulnerability, could be more substantially influenced [2, 3]. Psychotic experiences such as delusions are some of these consequences, products not only of a person's brain activity but also of their wider personal, social and cultural contexts, reflecting their world around. Current events affect the pathoplasty of delusions and have always featured by various delusional themes throughout human history [4]. Major events, politics, culture, technology, and epidemics, all can be mirrored in the delusional beliefs of mentally ill people. Whether it is the Truman show delusion, or being controlled by radio waves, or delusional themes focused on terrorism, implanted computer chips, or the swine flu and now Covid-19, are all linked to personal experiences, environments, and values. From the early phases of the coronavirus outbreak, and for a long time, the disease has attracted worldwide attention and the news coverage was overwhelming [5]. During these highly turbulent, unpredictable and puzzling situations people look for explanation and meaning, even the most psychologically vulnerable individuals. Moreover, if in non-psychotic subjects the disease can be seen as a metaphor - the example of cancer and tuberculosis is typical [6] - in psychotic patients the encounter with the real of the pandemic often triggers delusional constructions.

Case presentation

A 27-year-old, native Greek, unmarried male patient was brought to our emergency department, by the police, after climbing the home balcony railings and attempting to cut the cable of the main power supply. His father and a neighbor reported a marked change in his behavior over the previous three months. He exhibited symptoms of behavioral disorganization like aimless wandering and running about in the streets in a bizarre manner, frequently undressed, occasionally mumbling to himself and frequently turning on and off electric board switches when at home. On examination, the patient appeared withdrawn and neglected, being unable to care for himself and his personal hygiene. He looked younger than his actual age, rapport was often poor, eye to eye contact was usually avoided, and psychomotor activity was generally reduced (without any clear-cut catatonic features). There was usually decreased spontaneity of talk, with variably prolonged reaction times and thought blocking. His main thoughts appeared to be about being watched and

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persecuted by the gypsies Roma who conspired against him and his family and intended to burn him alive, possibly by means of electrical devices. In the beginning of covid-19 outbreak he thought that the virus was hunting him and he elaborated erratic movements in order to avoid being caught. Later, he figured out, after reading a message in the internet, that his ingrown toenail disease that appeared concurrently, affected covid-19 disease, making him responsible for the unemployment in the whole world. He names the covid-19 virus, instead of coronavirus, "con-virus", as of being able to conn (to deceive), a neologism in Greek language. Auditory hallucinations were persistent, mostly commanding in the second person ("come here") and in a state of perplexity and confusion he registered distressing alterations in sensory qualities such as unpleasant olfactory and gustatory hallucinations, but also changes in shape of things e.g. the shape of the frames on the walls and even identified the same faces in people seen in the super market and on the road. His affect was flat or blunted, with reduced reactivity, attention could generally be aroused initially, but was difficult to sustain. It was difficult to do a detailed cognitive assessment, in the emergency department, but orientation and memory appeared to be grossly intact. Lack of insight was evident. Physical examination and laboratory results revealed no pathological findings. The pharynx swab was taken for novel coronavirus nucleic acid test. He was involuntary admitted to the psychiatric clinic.

Psychiatric history

No prior psychiatric treatment or hospitalizations were reported. Prodromal signs and symptoms such as social withdrawal and loss of interests, drive and ambition, appeared since late puberty. He reported the presence of vague ideas of reference from middle childhood (9 years of age). His mother, suffering from schizophrenia, gave birth to the patient at the age of 42. Before the delivery she had eight other late miscarriages. The patient was born by caesarean at 7 months and his father reported that previously they had done all the prerequisite exams. He was placed in incubator for one and a half month, and then he was taken home. Delayed language, cognitive and motor development (his father was obliged to hold the pencil for him to help him write) and the presence of 'fears' even from preschool period (delayed finger sucking) were mentioned. When he was 3 years old his mother was hospitalized in a psychiatric hospital. Due to learning difficulties from the second grade he was referred to, and attended a special school for 5-6 months, till third grade and then interrupted the process. He was able to socialize with peers and finally completed a special education in a vocational school, but had no working experience. He served the military service without a weapon. He had no substance abuse history.

Course of disease and prognosis

During the second day of hospitalization he stated being the con-virus, responsible for the whole world suffering.

He mentioned that during this year he understood that he provoked all these events. Since 1995 his parents were quarreling because of him but they did not know the reason, he now knows. By the end of February he provoked the con-virus – coronavirus, he sensed that something evil is going to happen and others knew that as well. They send him a link through the internet with the meaning: paradise → parents and hell → me. He read in the internet that his ingrown toenail disease caused the unemployment. He listens to one-two voices from the house next-door, telling him to come over. He wanted to cut the electrical cables because all electrical devices were influenced. Ever since 2009 he saw the signs, recognizing same people at home, super market or at school, but he ignored them. On November 2019 a car passed by him, he then thought that it was incidental, but now he believes that it would have been better if the car had hit him.

Positive and Negative Syndrome Scale (PANSS) assessment confirmed high symptom severity (total score: 101/210; positive scale: 21/49, negative scale: 24/49; general psychopathology scale: 56/112). Results from the Wechsler Adult Intelligence Scale (WAIS) indicate a total score of 72. CT brain scan revealed lateral ventricular enlargement (see Picture 1). Result from the pharynx swab for novel coronavirus nucleic acid test was negative. During inpatient treatment in our department we initiated olanzapine 20 mg/day, risperidone 2mg/day and lorazepam (up to 3 mg/day).

During the first days of hospitalization the patient was experiencing positive symptoms: auditory hallucinations, persecutory, guilt, grandiose and delusions of reference, first-rank schneiderian symptoms such as delusional perceptions, misidentifications and other experiences of influenced thought, conceptual disorganization, illogicality, unusual thought content, bizarre behavior, neologisms, negative symptoms: affective flattening, unchanging facial expression, decreased spontaneous movements, paucity of expressive gestures, motor retardation, poor eye contact, sometimes see through gaze, affective non responsivity, blocking, increased response latency, neglected grooming and hygiene, anhedonia, asociality, apathy, preoccupation and somatic concern, as well as cognitive deficits, and lack of judgment and insight. Patients with the above symptoms constellation, lasting one month or more, are classified as suffering from schizophrenia, paranoid type, F20.0, according to ICD-10 (International Classification of Diseases, tenth edition).

Features weighting toward poor prognosis include: pre-term infant with positive family history, young and insidious onset, brain structural abnormalities, and poor premorbid level of functioning, primary negative and prominent cognitive symptoms and poor support systems.

Discussion and conclusion

The first declared infection by COVID-19 in Greece was in the 26th of February 2020 and by that time our patient had already established delusions of persecution, being hunted by the virus, evident in inappropriate compensatory

behaviors, such as bizarre movements in order to avoid being caught. Later he believed being persecuted by the gypsies Roma, possibly influenced by the detailed media coverage during that time, vividly presenting aggressive scenes after identification of infected people among them. Struggling for containment and integration, he finally realized he was the virus, and that explanation suddenly made sense for him.

Relying on what the patient and his father choose to tell us we attempted to reconstruct the series of events that led to full-blown delusion, working backwards, in order to identify the stages of delusion formation: the emotional matrix, the provocative stimulus, the perception, the interpretation, the reinforcement, and the full-blown delusion [7]. Covid-19 pandemic provoked so many powerful emotions, offering the ideal ground for the growing of a delusion (he sensed that something evil is going to happen and others knew that as well). As a result of a psychosis-related perceptual defect and neurocognitive deficits, it is possible that the patient had misperceived and misinterpreted everyday stimuli, even from the media or past events. For reasons of heredity and neurodevelopmental issues, psychosis-prone individuals, according to Kurt Schneider, constitute self-reference delusions that are "momentous, urgent, and somehow filled with personal significance" [8]. In this way self-referential interpretation of the distorted stimulus, aided by cognitive biases, led to the delusional belief that events follow a pattern (since 1995 his parents were quarreling because of him, since 2009 he saw the signs, recognizing same people at home, super market or at school, on November 2019 a car passed by him, he then thought that it was incidental, but now he believes that it would have been better if the car had hit him, his ingrown toenail disease that appeared concurrently, affected covid-19 disease, making him responsible for the unemployment, they send him a link through the internet with the meaning: paradise→parents and hell→me and the infected from Covid-19 gypsies Roma conspired against him and his family and intended to burn him alive). The pattern seemed to repeat itself and to confirm its truth, then the road opened for progression to full-blown delusion (he stated being the con-virus, responsible for the whole world suffering).

The pathophysiology of delusion formation remains elusive. Biological, cognitive, psychological and social theories sometimes contradict one another. From Jaspers, Freud and Lacan to modern era, from the idea of delusional mood - delusion proper [9] and from the ego disintegration and 'loss of ego boundaries' [10] or the foreclosure of the Name – of the – Father and the failure of the symbolic [11], to salience network [12], neuromolecular hypotheses [13] and post Kleinian view of psychotic states of mind in the area of projective identification [14], the fact remains the same. Schizophrenic delusions in whatever way they are formed, they often seem to reflect the sociocultural characteristics of their epoch.

Declaration of Competing Interest

The authors declare that they have no competing interests.

The reported patient was informed and agreed in the pub-

lication of this report.

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Picture 1: CT Brain Scan

