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CASE REPORT

Delusions with content related to COVID-19 pandemic, in non-infected psychiatric hospitalized patients: a six-case series

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ABSTRACT

We briefly present a case series of six patients hospitalized in the Department of Psychiatry, University General Hospital of Ioannina, between the first (starting March 23, 2020) and the second (starting November 7, 2020) lockdown in Greece who presented with COVID-19 - related delusional ideas. All patients had negative PCR prior to admission and no history of COVID-19 infection. The first three of our cases were admitted during the first lockdown, between March 23 and May 4, one involuntary and the other two voluntary. The first one was diagnosed with acute and transient psychosis (F23 - First Episode Psychosis) and the other two with psychotic depression (F32.3). Three additional patients were admitted voluntary after the end of the first lockdown. One was diagnosed with acute and transient psychosis (F23-First Episode Psychosis) and the other two were relapses of a known psychiatric disorder (Bipolar disorder F31.5 and Psychotic depression F32.3). At follow-up six months after discharge all patients were in remission following antipsychotic medication, among other medicines. These cases reveal that COVID-19 pandemic may have an impact on the delusional content of new or preexisting psychotic disorders during the COVID-19 pandemic.

KEYWORDS: COVID-19 pandemic, psychosis, psychotic reactions, delusional content

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Introduction

Mental Health consequences of the COVID-19 pandemic are of increasing concern worldwide.¹ Even though vaccines and treatments have been developed, we are currently facing threats of mutations. At present, more than 280 million cases and over 5,4 million deaths have been reported.² The impact of this unprecedented public health crisis on mental health and especially on the outset of a new onset psychosis is a growing concern.³ The delusional content relevant to the pandemic in people presenting with psychotic disorders is introduced in a limited number of reports.^{4,5,6} Similar findings have been reported in stressful life events⁷. We report a six-case series of delusional content relevant to COVID-19 pandemic in non-infected psychiatric hospitalized patients.

Case presentation

The department of psychiatry of the University of Ioannina covers a catchment area of approximately 200.000 people in Northwestern Greece. Its 32-bed psychiatric clinic is divided into two sectors, a 22-bed "open ward" and a 10-bed "emergency ward". There is also an Early Intervention Unit⁸ providing care for patients presenting with a First Psychotic Episode and a Consultation-Liaison Psychiatric Unit.⁹

During the period of mandatory quarantine measures starting on March 23, 2020, all patients admitted underwent PCR testing before admission. During the present study's period (March 23, 2020 to November 7, 2020) six patients out of 464 total admissions presented with delusions with content relevant to the COVID-19 outbreak. Two of them presented with a First Episode of Psychosis (FEP) (out of 15 FEP admissions). All patients had no history of SARS-CoV-2 infection. Clinical diagnosis was made by experienced psychiatrists according to the tenth revision of the International Classification of Diseases (ICD-10).¹⁰ Additionally, the Brief Psychiatric Rating Scale (BPRS) had been employed at admission and discharge as well as during the 6-month follow-up. This project is ongoing, but up to now (6 January 2022) no other case with delusional content related to the pandemic have been appeared.

The sociodemographic and clinical characteristics of those six patients are presented in *Table 1*.

Case 1

Mr. X, a 35- year- old man, married, car mechanic, living in Ioannina, was admitted involuntarily to the Psychiatric Emergency Department of our hospital, two days after the first national lockdown in Greece (March 23,2020). His family noted he was afraid of getting infected with SARS-CoV-2 and to eliminate this possibility he closed his car repair shop and forbade his mother and his 4-month-pregnant wife to leave the house while telling them "we are all going to die". He felt a sensation of tickling in his nose, leading him to the conviction that he has been infected and as a result he stopped any contact with his family. His condition was worsening and three days before the admission he presented extreme insomnia, agitation and refusal to drink and eat anything. The psychiatric evaluation revealed that he also suffered from auditory hallucinations, telling him "He should warm up people's hearts to banish all diseases" and visual-olfactory hallucinations (he complained having a sensation of a very disturbing smell of liquid gas all around his residence) as well as delusions of persecution, poisoning and religious content. Mr. X reported a history of delusional ideas of reference and olfactory hallucinations of a gas that seemingly would be toxic 6 months ago. He had rapid response to treatment (aloperidin 5mg and later aripiprazole 20mg) and was discharged after 17 days of hospitalization and referred to the First Episode of Psychosis Unit for follow-up.

Case 2

Mrs. A, an 88-year-old, retired, married woman living in a village near Ioannina, was admitted voluntarily after attempted suicide by cutting the veins of her right wrist, during the first month of national lockdown in Greece. Her relatives noticed severe anxiety, insomnia and feelings of hopelessness associated with the delusional belief that a local shop owner infected her with SARS-CoV-2. According to her son, she was on a ten-day treatment (escitalopram and quetiapine) from a private psychiatrist. Psychiatric evaluation revealed psychomotor agitation, dysphoric mood, anorexia, insomnia and the delusional belief that she and her entire family were infected with SARS-CoV-2. She was convinced that the doctors were going to torture and kill her, and she begged for mercy. Three days before discharge she developed a fever, believing again that she was infected, but a urinary tract infection was detected. She was hospitalized for 20 days and the delusions of infection were eliminated, getting discharged in remission with a diagnosis of psychotic depression, F32.3.

Case 3

Mrs. K is a 64-year-old woman, retired teacher, mother of two children, living with her husband in an urban area in Ioannina. Two weeks after the first national lockdown she began to suffer with severe anxiety, insomnia, and feelings of worthlessness. She was convinced that she was infected with SARS-CoV-2 and that the world was at the edge of destruction, a conviction followed by guilt, and by somatic, nihilistic content (that her internal organs were destroyed). She was admitted voluntarily and discharged in remission after 38 days of hospitalization, with a diagnosis of psychotic depression, F32.3.

Case 4

Mrs. P, is a 36-year-old female, occupied part-time in her husband's business. She has a known history of bipolar disorder and positive psychiatric family history. She was admitted voluntarily eleven days after the end of the first national lockdown and three days after a suicide attempt with cleaning chemicals. Psychiatric evaluation revealed a delusional conviction of SARS-CoV-2 infection and a belief that the disease was spreading to her family. Psychomotor agitation, insomnia, disorganized speech, ideas of uselessness and inability to take care of her children were detected. She was discharged in remission after 27 days of hospitalization with a diagnosis of bipolar disorder and present episode severe depression, with psychotic features, F31.5.

Case 5

Mr. K is a 24-year-old male, living in Ioannina, Greece, with his parents and working at an NGO. He was admitted voluntary due to emerging psychotic symptomatology and self-destructive ideations, a month after the end of the first lockdown in Greece. Mr. K described a two-month period prior to admission of unusual stress and absent-mindedness. He presented with a delusion that he himself was the COVID-19 that came to earth to plague humankind and presented with psychomotor retardation, anhedonia, sleep difficulties and suicidal thoughts. He was discharged in remission after 16 days of hospitalization with a diagnosis of acute and transient psychotic disorder, F23.

Case 6

Mrs. E is a 62-year-old married woman, mother of two children, living in Ioannina with her husband. She was referred voluntarily, after five days of hospitalization in the Internal Medicine Ward of our hospital, due to a severe suicide attempt with analgesics. She described a two-month period prior to the attempt with symptoms of depressed mood, anhedonia, insomnia and somatic symptoms (especially fatigue) which were attributed to the delusional belief that she had been infected with SARS-CoV-2. Mrs. E, had a previous episode of psychotic

depression during the H1N1 pandemic in 2010, with delusional ideas of contamination and transmission of the virus. She was discharged in remission after 9 days of hospitalization with the diagnosis of psychotic depression, F32.3.

Discussion

Given the stress of COVID-19 pandemic and the concerns about seclusion and mortality, several psychological stressors have emerged and may precipitate to the presentation of psychotic symptoms. The literature on COVID-19-related delusional themes in unaffected psychiatric patients remains limited. To the best of our knowledge, two other cases from Greece have been published that included patients in need of hospitalization.^{11,12} One multicenter study from Spain¹³ with 57 non-infected cases reported that, 33 had been diagnosed with a Brief Psychotic Episode triggered by the pandemic outbreak, confirming that 57,6% presented with delusional ideas relevant to the COVID-19 pandemic. Two of our cases were initially diagnosed with a First Episode of Psychosis and a transition to schizophrenia was later confirmed. The three cases of self-harm were similar, due to the self-conviction of COVID-19 infection⁶ that was present in them, even though it is known how isolation and loneliness alone may affect the suicide risk, especially in older patients.¹⁴ We are given to understand that although psychotic symptoms may have appeared at the first wave of the COVID-19 outbreak, a pandemic such as the current one has different phases and depending on them a patient may react differently. Future long-term research is necessary in order to pinpoint the factors that may contribute to a probably different delusional content through different phases of Pandemic in a new onset psychosis or in a previous exacerbation.

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Table 1. Sociodemographic and clinical characteristics of the cases

PSYC

	Case 1	Case 2	Case 3	Case 4	Case 5	Case 6
Age	35	88	64	36	24	62
Gender (Male/Female)	M	F	F	F	M	F
ICD-10 Diagnosis	F23 (FEP)*	F32.3	F32.3	F31.5	F23 (FEP)*	F32.3
Admission	Involuntary	Voluntary	Voluntary	Voluntary	Voluntary	Voluntary
Personal history of mental illness	Negative	Negative	Negative	Positive	Negative	Positive
Family history of mental illness	Negative	Negative	Negative	Positive	Positive	Unknown
First day of hospitalization	March 25, 2020	April 14	April 21	May 17	June 8	August 8
Duration of hospitalization (days)	17	20	38	27	16	9
Type of delusions	Somatic Religious	Somatic Religious	Somatic Nihilistic	Somatic Nihilistic	Reference Persecutory (Beliefs that himself was the COVID-19)	Somatic Religious
Suicide attempt	No	Yes	No	Yes	No	No
Antipsychotic/antidepressant Treatment(s)	Haloperidol Olanzapine	Olanzapine Risperidone Escitalopram	Olanzapine Venlafaxine	Olanzapine Sertraline Chlorazepam Lithium	Risperidone	Olanzapine Escitalopram Alprazolam
BPRS Baseline	73	84	72	64	51	53
BPRS at discharge	29	42	29	41	26	34
BPRS during the second lockdown in Greece (starting November 7,2020)	30	33	25	23	28	24

* FEP, First Episode of Psychosis

ΠΑΡΟΥΣΙΑΣΗ ΠΕΡΙΠΤΩΣΗΣ

Παραληρητικές ιδέες με περιεχόμενο σχετικό με την πανδημία COVID-19 σε μη προσβεβλημένους νοσηλευθέντες ψυχιατρικούς ασθενείς: μια σειρά έξι περιπτώσεων

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-----ΠΕΡΙΛΗΨΗ-----

Παρουσιάζονται έξι περιπτώσεις ασθενών που νοσηλεύθηκαν στην Ψυχιατρική Κλινική του Πανεπιστημιακού Γενικού Νοσοκομείου Ιωαννίνων (ΠΓΝΙ) και εμφάνισαν παραληρητικές ιδέες με περιεχόμενο σχετιζόμενο με την πανδημία COVID-19, στο χρονικό διάστημα από τις 23 Μαρτίου 2020 (ημερομηνία της έναρξης των πρώτων καθολικών περιοριστικών μέτρων) έως τις 7 Νοεμβρίου 2020 (ημερομηνία έναρξης περιοριστικών μέτρων για δεύτερη φορά). Όλοι οι ασθενείς είχαν PCR αρνητικό για COVID-19 και κανείς δεν είχε ιστορικό νόσησης. Οι πρώτοι τρεις από τις περιπτώσεις ασθενών εισήχθησαν κατά τη διάρκεια του πρώτου lockdown, μεταξύ 23/3/2020 και 4/5/2020, ο ένας ακούσια και οι άλλοι δύο εκούσια. Ο πρώτος διαγνώστηκε με Οξεία Παροδική Ψύχωση (F23 - Πρώτο Επεισόδιο Ψύχωσης) και οι άλλοι δύο με Ψυχωτική Κατάθλιψη (F32.3). Τρεις ακόμη ασθενείς εισήχθησαν εκούσια μετά το τέλος του πρώτου lockdown. Ο ένας διαγνώστηκε με Οξεία Παροδική Ψύχωση (F23 - Πρώτο Επεισόδιο Ψύχωσης) και οι άλλοι δύο ήταν υποτροπές προϋπαρχόντων ψυχιατρικών διαταραχών (Διπολική διαταραχή F31.5 και Ψυχωτική κατάθλιψη F32.3). Η επανεκτίμηση έξι μήνες μετά την έξοδό τους από το Νοσοκομείο ανέδειξε σημαντική ύφεση σε όλους. Αυτές οι περιπτώσεις ασθενών αποκαλύπτουν ότι η πανδημία της COVID-19 ενδέχεται να λειτουργεί παθοπλαστικά σε ψυχωτικές διαταραχές με παραληρητικές ιδέες με περιεχόμενο σχετιζόμενο με την πανδημία COVID-19.

ΛΕΞΕΙΣ ΕΥΡΕΤΗΡΙΟΥ: Πανδημία COVID-19, ψύχωση, ψυχωτικές αντιδράσεις, παραληρητικές ιδέες.

Επιμελητής συγγραφέας: Χρήστος Μαντάς, Ψυχιατρική Κλινική, Τμήμα Ιατρικής, Σχολή Επιστημών Υγείας, Πανεπιστήμιο Ιωαννίνων, Ιωάννινα 45110, Ελλάδα, E-mail: chmantas@uoi.gr