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Case series

The Impact of the COVID-19 Pandemic on Psychoses: Rapid Review and Case Series

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Abstract

Objectives: In terms of the current corona virus pandemic, a rising number of anxiety and depression symptoms has been reported in different countries. In inpatient psychiatric medical care, a fast increase of the number of patients affected by psychotic symptoms relating to the COVID-19 pandemic is observed. **Methods:** We performed a selective literature research on the subject of a possible association of coronavirus pandemic with an impairment of schizophrenia and related disorders. Furthermore, we present a short series of recent cases relevant to that topic. **Results:** Up to now, data on this subject are very rare. Currently, we witness an increase of severe psychotic phenomena under patients pre-diagnosed with schizophrenia or related disorders which seems to be closely linked to the coronavirus pandemic. Furthermore, clinical observations and case reports show an increased rate of primary manifestations in psychotic diseases as well as a higher risk of committing suicide. **Discussion:** Medical care workers must lay a close eye on the psychopathological status of their patients in out- and inpatient medical care to prevent rapid progression of psychotic syndromes with possible lethal outcome in individuals.

Keywords: coronavirus pandemic, COVID-19, emergency psychiatry, psychosis, schizophrenia

Introduction

In times of the coronavirus pandemic, several reports on its impact on mental health in terms of rising anxiety, depressive symptoms and adjustment disorder in mentally healthy people have been made [1,2]; these effects were also observed in previous pandemics [3]. Although being probably more affected than others, people with mental disorders are not sufficiently considered in current research up to date.

Besides a significant reduction of the number of social contacts in everyday life, people with mental disorders suffer from loss of daily structure and routines, restrictions in everyday working life and rising of general uncertainty concerning the further pandemics' development and personal economic and financial situation. Furthermore, assistance offered by ambulatory psychotherapists, outpatient psychiatric medical care and other social support systems as ambulatory psychiatric nursing is limited significantly by now. Aggravatingly, individuals with a schizophrenic or related disorder often tend to have just a few social contacts due to stigmatization from parts of society [3,4].

In the context of inpatient treatment, a severe aggravation of different psychiatric disorders such as depression, anxiety disorders and addictive behavior was observed in the period of coronavirus pandemic. However, patients with psychotic disorders often accompanied by a loss of sense of reality seem to undergo an intensified aggravation of their symptoms due to delusional misinterpretation in comparison to patients without psychosis.

However, an increase of limited psychotic symptoms during former pandemics has been described in the past [6].

Aim of this article is to summarize available literature on an association of the current pandemic with a deterioration of psychotic disorders. Additionally, we present some current clinical examples.

Methods

We did a selective literature research on PubMed with the keywords "psychosis" "schizophrenia" "mental health" "psychiatry" and "suicide" in combination with "coronavirus" and "COVID-19" and considered publications up until 11th of May 2020. We identified 18 articles relevant to this subject, also considering sources named in these articles.

Results

Through literature research, we barely identified any data concerning the pandemic's influence on psychotic mental disorders in general or the de novo emergence of psychotic symptoms in particular. Most publications were submitted by Asian researchers [7,8]. Rajkumar describes in a review that most publications refer to the pandemic's effect on mentally stable people. However, it must be feared that a "mental health crisis" might evolve due to coronavirus pandemic [9]. The author anticipates a rise of anxiety and uncertainty in mentally ill individuals; es-

pecially hypochondriac fears are supposed to occur in a higher frequency.

In their article, Fonseca et al expect a higher rate of relapse for patients pre-diagnosed with schizophrenia [9] due to a higher level of stress and emotional arousal, caused by social isolation, restrictions in everyday life and routines as well as by a reduction in medical support and a lack in compliance in use of medication. Some authors expect the impacts on mental wellbeing due to the pandemic's still uncertain development to be more distinct for psychiatric patients than for the mentally healthy population. This hypothesis is also supported by Yao et al [10,11].

Some authors call for an adjustment of psychiatric and psychotherapeutic offers with regard to a higher need that infers from the coronavirus pandemic [12,13,14].

Currently, Kozloff et al. stated that individuals pre-diagnosed with schizophrenia or related disorders might be in elevated danger to infect themselves with the current Coronavirus due to "cognitive impairment, lower awareness of risk, and barriers to adequate infection control including congregate living" [15]. Also once infected the somatic treatment outcome might worsen because individuals with pre-existing schizophrenia are suffering from metabolic comorbidities above the average.

Case series

Thus, we present a short case series on the subject of the coronavirus pandemic's impact on patients with recent onset psychoses or pre-diagnosed schizophrenia or related disorders. All patients described below were admitted to our secured ward in the months of March and April 2020 and were tested negative for an infection with the coronavirus at the beginning of the treatment by throat swab.

A 55-year-old policeman was admitted to hospital suffering from depressive symptoms related to what turned out to be a first episode of a bipolar disorder. Shortly after admission, his mood switched to maniac state with increasingly aggressive behavior. Furthermore, he suffered from delusions of grandeur, being convinced of being a pandemic specialist and therefore obliged to save the people from corona virus.

A 30-year-old patient pre-diagnosed with paranoid schizophrenia attempted suicide by heavily cutting his throat, abdomen and both forearms. After undergoing emergency surgery and spending 3 days in intensive care unit, he was admitted to secured ward for further psychiatric treatment. While debriefing the suicidal attempt, he reported that he suffered from acoustic hallucinations such as hearing voices telling him he was infected by coronavirus and that it is going to make him "die a wretched death". So, he decided to avoid this by trying to commit suicide.

A 24-year-old female geriatric nurse diagnosed with borderline personality disorder was admitted to secured ward due to suicidal ideations. Anamnesis revealed increasing additional hebephrenic symptoms such as inadequate affect, disturbance in her train of thoughts and talking in an invented dialect. The patient described pandemic-associated stress at work as a trigger for deterioration of her mental health status.

A 31-year-old patient with a preexisting diagnosis of schizoaffective disorder was admitted to our secured ward due to delusions of being infected with coronavirus accompanied by severe spasms of coughing without any physical correlate. Weeks be-

fore admission, the patient described increasing disturbances in his train of thoughts as well as intermittent optical and auditory hallucinations.

A 31-year-old female nurse pre-diagnosed with a major depression was admitted to our closed ward due to suicidal ideations. For the first during the course of her mental disorder she suffered from delusions thinking her parents who live abroad were harmed or have already died from a COVID-19-Infection.

Discussion

A rising number of patients with psychotic disorders worsening or even emerging with symptoms related to coronavirus pandemic occurred rapidly since March 2020. Patients with a pre-existing diagnosis of psychosis may experience a rapid deterioration, as described in Fischer's case report [16], as well as patients without pre-diagnosed mental disorders suffering from psychosis for the first time as described above. Additionally, some of the primary manifestations were observed at a higher age as one would usually expect. An explanation for that circumstance on a molecular level might be a higher release of dopamine which can be observed in individuals at clinical high risk for psychosis when exposed to psychological stress. This finding is valid for individuals with pre-diagnosed schizophrenia too [17]. According to these neurobiological findings, the current pandemic might be classified as an extraordinary stressful event thus provoking a relapse, deterioration or even primary manifestation of psychosis. However, it is concerning that we lately have also seen individuals suffering from a pre-diagnosed mental disorder never having experienced psychotic delusions before currently developing those for the first time. For us, it is alarming that individuals being confronted by the pandemic's impact while working (e.g. by working in health services) seem to be particularly vulnerable.

The restrictions that go along with the current pandemic (such as reduction of social contacts, loss of daily structure, reduction in mental health care) as well as the psychological stressors (fearing for loved ones, uncertainty in terms of the further pandemic's development, financial insecurity, loss of employment) might have a significant impact on the psychological constitution of the mentally healthy people. Transferring this to people with mental disorders, one would expect a stronger impact on their well-being. Thus, psychotic symptoms or suicidal ideations or behavior might lead to a possible lethal outcome. Furthermore, individuals affected by addictive disorders might suffer a rise in consuming drugs or alcohol while fighting anxiety and other mental burdens [18]. Equivalently, the risk of relapses into substance abuse rises, which for its own might provoke a negative impairment on individuals with mental disorders.

In general, the risk of committing suicide is higher in people diagnosed with schizophrenia or related mental disorders than in non-psychotic individuals; given different sources, lifetime suicide risk in schizophrenic individuals is estimated somewhere between 5% up to 10% [19]. Especially in times of global crisis, a further increase in this rate must be expected; there are several case reports from different nations supporting this thesis [20] as well as the observations we made during our inpatient treatments in current times of coronavirus pandemic.

Lots of psychiatric patients are not only treated by a psychi-

atric specialist. Especially while suffering from a primary manifestation of a mental disorder, patients often present their symptoms to general practitioners or other specialized physicians first. Therefore, we recommend medical staff of all disciplines in out- and inpatient treatment to lay a special focus on enquiring their patients' psychopathological changes during coronavirus pandemic in order to detect those individuals in need of psychiatric treatment. Thus, attention should be particularly directed on possible suicidal thoughts and psychotic symptoms such as delusions and hallucinations. A further treatment by a psychiatric specialist should be initiated if needed.

According to the literature research described above, clinical observations from other authors support the impression that patients with severe mental disorders which include a loss of sense of reality may react sensitive to the pandemic's impacts. We see an enormous impact of the current pandemic on mental health in general and particularly in patients with schizophrenia and related disorders which may worsen during the course of the COVID-19 pandemic. Alarming, also the risk of suicidality seems to increase too.

For a treatment of individuals with schizophrenia and related disorders with a link to the current pandemic following conventional guidelines seem to be sufficient, so the most important point is to identify those individuals suffering from aggravated or de novo psychosis in the first place.

In our clinical experience, most of the psychiatric patients are relieved when offered the opportunity to talk about problems associated with the current coronavirus pandemic. Also, patients seem to appreciate a negative testing for an infection with the current coronavirus. Thus, we offer a testing at the beginning of each inpatient treatment by throat swab.

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DisclosureStatement

The authors declare no conflict of interest.

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