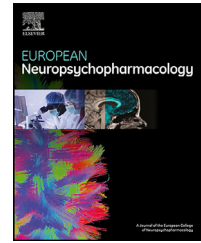




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INSIGHTS

The impact of the Covid-19 pandemic on patients with schizophrenia



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Since the first outbreak of SARS-CoV-2 cases, COVID-19 pandemic has had and still having an enormous impact on health across the world. Although SARS-CoV-2 is a virus that primarily causes respiratory dysfunction, it can directly and indirectly affect many other systems, including the central nervous system, with important consequences on mental health. Moreover, the pandemic economic and social consequences produced an important negative effect, resulting in a significant deterioration in mental health and an increase in the burden of mental health services (Moreno et al., 2020). In this scenario, COVID-19 impact has been particularly problematic on schizophrenia. Studies conducted in the first phases of the pandemic reported that schizophrenia patients showed low levels of information and concern regarding contagion, an increased risk of SARS-CoV-2 infection, and worse COVID-19-related outcomes, including mortality. The severity of psychotic symptoms, however, was substantially stable and subjective well-being did not worsen significantly, probably as a result of the autistic features and tendency towards isolation that frequently characterize this population (Barlati et al., 2021).

As the situation progressed, more studies investigated with methodological rigor the impact of the pandemic on patients with schizophrenia. In particular, COVID-19-related mortality appears to be consistently increased in people with schizophrenia. A recent study, conducted on

a sample of about twenty-six thousand individuals, more than seven thousand of which had a laboratory-confirmed SARS-CoV-2 infection, confirmed this finding: a diagnosis of schizophrenia emerged as the most important independent mortality risk factor at 45-days observation after age, surprisingly surpassing other medical conditions such as heart failure, hypertension, diabetes and chronic kidney disease. Other mental health disorders, such as mood and anxiety disorders, did not produce a significant increase in mortality in this sample after adjusting for other medical factors (Nemani et al., 2021). Another large study, including database-extracted information from a total of more than twenty-five thousand subjects diagnosed with schizophrenia and an equal number of gender- and age-matched individuals, confirmed this finding: COVID-19 mortality was increased threefold in patients with schizophrenia, which were also twice as likely to be hospitalized for COVID-19, after controlling for socio-demographic and clinical risk factors (Tzur Bitan et al., 2021).

Recent findings also shed more light on the engagement in infection-preventative behaviors in people with schizophrenia. According to a carefully conducted study, while people with severe mental illness on the whole appear to engage in preventative behavior as much as healthy controls, individuals with schizophrenia are less likely to stay at home, wear face masks, and work remotely (Pinkham et al., 2021). Moreover, individuals with severe mental disorders, and those with schizophrenia in particular, showed higher levels of psychological distress

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related to COVID-19, with increased depressive and anxiety symptoms, stress and feelings of loneliness.

Beside the direct effects of SARS-CoV-2 infection and the risk of mortality, some studies report that the pandemic appeared to produce a substantial negative impact also in some key psychopathological dimensions: a recent work reported a substantial increase in severity of negative symptoms during the pandemic, with a consistent exacerbation of both behavioral and experiential anhedonia, avolition, and asociality as compared to pre-pandemic levels (Strauss et al., 2021).

It is also important to mention the psychiatric sequelae of SARS-CoV-2 infection and to remind that about two thirds of patients hospitalized with COVID-19 may show clinically relevant cognitive impairments even 4 months after discharge. In this perspective, since schizophrenia is characterized by a primary cognitive deficit, this population seems to be more at risk of developing further cognitive deterioration secondary to COVID-19 infection, with a consequent worsening of the overall outcome (Llach and Vieta, 2021).

The pandemic and the resulting restrictions, implemented in order to avoid the spread of contagion, also had a considerable impact on the treatment of schizophrenia. Treatment with long-acting injectable medications became problematic in certain locations, as the injections have to be administered during an in-person visit and this can represent a considerable issue for quarantined people or in places where restrictions are particularly stringent. Supply and distribution chains also were compromised during the most problematic periods of the pandemic, particularly in low-income countries. Avoiding treatment discontinuation without increasing the risk of infection is possible, but a combination of careful planning with the patient, close coordination and communication with community supports and attention and dedication by the clinical practitioner is required (MacLaurin et al., 2021).

Treatment with clozapine could also represent an issue, as it may increase susceptibility to infections and monitoring white cell blood count could be difficult to implement due to pandemic-related restrictions. Some expert recommendations suggest lowering the dose of clozapine of as much as half in subjects that present fever or flu-like symptoms. Moreover, hyper-inflammation and severe pneumonia related to COVID-19 could lead to an unexpected increase in the blood level of clozapine, with consistent risk of intoxication: in these cases, clozapine should be reduced by as much as a third of the original dose or suspended entirely. In order to avoid the risk of schizophrenia relapse, however, an alternative to withdrawal is to monitor blood levels of clozapine, as well as the clinical condition of the patient (Tio et al., 2021).

Telemedicine and e-mental health could represent valid supports to help maintaining the continuity of care for people with schizophrenia without increasing the risk of contagion and viral spread with in-person visits. In the context of telepsychiatry, the use of digital phenotyping tools and monitoring, such as mobile passive monitoring platforms, could also provide a new perspective in improving human behavior research, identifying relevant changes in human behavior when caused by a common external

environmental factor (Jagesar et al., 2021). However, in the treatment of patients with schizophrenia, face-to-face visits in some cases remain essential: the evaluation of first-episode cases, of exacerbations of previously controlled psychotic symptoms, of patients with multiple comorbidities and of complex cases in general requires a level of care and attention that can not be currently implemented in videoconferencing visits.

In conclusion, the COVID-19 pandemic is having a significant negative impact on the lives of people with schizophrenia, and this fact is being confirmed more and more by well-designed studies. Particular attention and care are required by clinicians to help face the adversities characterizing this unusual situation.

Declaration of Competing Interest

Authors report no financial relationships with commercial interests related to this manuscript.

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