



SHORT COMMUNICATIONS

Time for lessons from the first wave of SARS-CoV-2 epidemic. A case report of a patient with acute psychosis and COVID-19 and later virus reactivation



Marko Saje^{a,*}, Karla Prebil^b, Blanka Kores Plesnicar^{a,b}

^a *Psychiatry Intensive Care Unit, Centre for Clinical Psychiatry, University Psychiatric Clinic Ljubljana, Chengdujska cesta 45, 1260 Ljubljana, Slovenia*

^b *Service for Prevention and Control of Hospital Infections, Centre for Clinical Psychiatry, University Psychiatric Clinic Ljubljana, Chengdujska cesta 45, 1260 Ljubljana, Slovenia*

Received 15 September 2020; accepted 11 December 2020

Available online 16 December 2020

KEYWORDS

Psychosis;
COVID-19;
Inpatient treatment;
SARS-CoV-2
reactivation

Abstract A case of a middle-aged male, suffering from acute psychosis while in self-isolation due to COVID-19 (coronavirus disease 2019) is presented. The patient required urgent hospital admission due to psychosis, which was only possible to COVID-19 unit of the Department of Infectious Diseases at the time. After transfer to psychiatric hospital, stool sample, taken as an additional preventive measure, was positive for the novel coronavirus. In addition, the patient experienced spontaneous virus reactivation few weeks later. This case report describes certain dilemmas, based on care for patients with mental illness as Europe stands on the brink of COVID-19 second wave.

© 2020 Asociación Universitaria de Zaragoza para el Progreso de la Psiquiatría y la Salud Mental. Published by Elsevier España, S.L.U. All rights reserved.

Background

A 2020 pandemic of COVID-19, a respiratory illness caused by a novel coronavirus SARS-CoV-2, has had a significant impact on almost all aspects of our society. One of the biggest challenges for healthcare systems worldwide and especially psychiatry has been establishing an adequate balance between preventive measures against contagion

and providing continuous and effective medical care. In addition to already being significantly more vulnerable, patients with pre-existing mental illness may also be among the hardest hit by short- and longterm consequences of COVID-19 pandemic.¹

Case presentation

We present a case of a middle-aged male with an acute polymorphic psychotic episode with manic features that occurred during a self-isolation due to suspected and later confirmed infection with SARS-CoV-2 in the beginning of

* Corresponding author.

E-mail address: marko.saje@psih-klinika.si (M. Saje).

virus spread in Europe, and additional subsequent symptomatic virus reactivation.

The patient has a history of a similar acute psychotic reaction two years before, during hospitalization for an acute and transient febrile state. At that time, a lumbar puncture, an MRI brain scan and extensive laboratory tests were all negative. Harmful alcohol consumption was also confirmed, without withdrawal symptoms. The febrile state was attributed to one of the seasonal viruses. The patient was transferred to a psychiatric unit where the psychotic disorder further subsided in the following days.

In 2020 on 14th March, the patient became symptomatic with a sore throat and a cough. Since the symptoms were mild, he was instructed by his general practitioner to self-isolate for at least 14 days, so he moved to the lower floor of his family house and strictly limited his contact with most family members. No nasopharyngeal swab for COVID-19 was performed, despite his request. On 20th March, the patient's wife noticed changes in his mood – he became increasingly anxious and emotionally unstable, with lack of sleep. In the next few days, religious and grandiose delusions occurred. His impulse control worsened and he became severely irritable. His psychiatrist advised immediate cessation of bupropion, which the patient was taking due to persisting symptoms of depression, and initiated olanzapine with fast titration but insufficient effect. The patient was brought to a psychiatric emergency unit where a routine admission screening showed elevated body temperature. Nasopharyngeal swab confirmed infection with SARS-CoV-2. The patient was referred for admission to COVID-19 unit of the Department of Infectious Diseases the same day since admission to a referral psychiatric hospital was not possible due to concurrent COVID-19. A consulting psychiatrist was included in the treatment soon after with gradual improvement of patient's mental status in the next two weeks. The course of the SARS-CoV-2 infection was uncomplicated and after two consecutive negative nasopharyngeal swabs, the patient was transferred back to psychiatric hospital on April 7th. At admission additional third swab was performed, which was negative, and as an additional preventive hospital measure based on the available information about SARS-CoV-2 transmission routes, a stool sample was also taken. The result obtained three days later was positive for SARS-CoV-2. At the time, the patient was already transferred to the general psychiatric unit, but used private room and toilet. Since the patient's condition was sufficiently improved, he was discharged to home care with his and his family's consent. In the following weeks, continuous phone and e-mail communication between the patient, his wife, and his psychiatrist was established. The patient's mental status additionally improved and return to work was planned among others. Two weeks after discharge and one day before his first scheduled in-person check-up in psychiatric outpatient room, the patient started to experience spontaneous and persistent cough with generally feeling worse. At that time, he had no contacts aside from his family and one visit with his physician. The rest of the family members were asymptomatic the entire time. Psychiatric check-up was postponed until the control swab was performed the next day, which was positive again for SARS-CoV-2. The patient and his family were instructed to self-isolate again, this time together. Nasopharyngeal swabs of other family members remained

negative. In following days additional screening was also performed, infection with seasonal virus and some other select respiratory pathogens were excluded. The patient's specific SARS-CoV-2 antibodies were positive. It has been concluded that the patient experienced a spontaneous reactivation of SARS-CoV-2 from lower parts of his respiratory system. The patient's control stool sample result on 9 May was negative for SARS-CoV-2, but the nasopharyngeal swab remained positive until two consecutive swabs on 20 and 21 May, respectively. On his first in-person check-up on 26 May, the patient's mental state was improved, without any psychotic symptoms. The patient was slightly depressed but otherwise felt significantly better.

Discussion

This case presentation most likely does not present an isolated case of a patient with a potentially serious mental illness and concurrent COVID-19, and even later virus reactivation. It describes the situation any psychiatric clinical setting could be faced with, now and even more likely in the future months. Our patient's psychosis was just one of many severe reactions in times of increasing psychological burden of the COVID-19 pandemic. Whether the patient suffered a reactive psychotic episode or had a recurrence of primary psychotic disorder remains a subject of careful follow up. Nonetheless he required emergency psychiatric hospital treatment which at that point was only possible at the COVID-19 unit of the Department of Infectious Diseases with an engagement of a consulting psychiatrist. The delay in performing a nasopharyngeal swab despite a relatively high pretest probability is likely to have additionally exacerbated anxiety and contributed to the worsening of the patient's condition.²

Since the beginning of the COVID-19 pandemic psychiatry has been faced with a significant challenge of providing constant effective care for patients with serious mental illness because of the need for fast implementation of reliable preventive measures against contagion. Specific psychopathological features such as reduced or even absent insight, insufficient compliance, and potentially unreliable (epidemiological) history, together with known and potentially high variability in false-negative rates of nasopharyngeal testing and possible viral shedding even while asymptomatic, all present a high risk of virus entry into SARS-CoV-2 free zones of psychiatric units.²⁻⁴ Behaviour of a person with acutely impaired impulse control due to, e.g., psychosis or mania, is at best unpredictable, with a high risk of serious complications requiring emergency admission. Psychiatric inpatients move and make close contacts with both each other and medical personnel. Limiting the spread of SARS-CoV-2 after its entry into a psychiatric hospital would be extremely challenging if not impossible, and implementation of additional preventive measures is therefore reasonable.³ Which of them are the most sensible remains a matter of a debate. In a worst-case scenario, establishing a COVID-19 unit (a so-called red zone) inside a psychiatric hospital would be necessary. Certainly, there would be advantages as well as disadvantages. For example, a more effective treatment of psychiatric conditions in a specialized environment with potentially shorter length of

inpatient stay on the pro side against a higher risk of COVID-19 complications, use of personal protective equipment with less skilled personnel, and additional staff requirements on the con side. Additional information about the SARS-CoV-2 and COVID-19 is still being published each day. To date, apart from close person-to-person transmission via droplets and contact routes, there is still insufficient data to either confirm or definitely exclude other possible routes of transmission.^{5,6} COVID-19 related gastrointestinal symptoms have been recognized as an indicator of viral genetic material in feces.⁷ Faecal viral shedding detectable for days to weeks after negative nasopharyngeal swabs has been reported, as in our patient's case.⁸ Furthermore, growing attention has been drawn to SARS-CoV-2 reactivation and even reinfection after certain time and its potential mechanisms.⁹ Despite sparse evidence for infectivity with virus reactivation, self-isolation still seems to be the next step, especially in the case of a symptomatic person.^{5,9}

Conclusion

This clinical vignette presents one of a likely growing number of situations in which clinical dilemma(s) arose despite additional preparations in advance. In the beginning of the pandemic, hospitals and medical staff received daily updated recommendations as new information was being published. Months later and after the first wave of COVID-19, despite much broader knowledge about the SARS-CoV-2, some uncertainties still remain. Lately as countries and economies have been reopening, also general COVID-19 anxiety has decreased. The virus is here to stay and until recently the second wave of COVID-19 was predicted for Fall 2020 but has probably already started in some countries of the European Union following the end of the summer holiday season, with daily growing numbers of confirmed new infections. This calls for re-evaluation and potential improvement of strategies used so far to find the optimum balance of all measures necessary for providing a safe environment for psychiatric (in)patients and medical personnel and also adequately effective care for all patients in need. Moreover the role of telepsychiatry has been increasingly emphasized during the COVID-19 pandemic due to its benefits.¹⁰ In addition to patients with pre-existing mental illness, many more people suffering from COVID-19 and its consequences will most likely require psychiatric help in the near future.

Ethical considerations

The patient has given his informed consent for publication of the manuscript. The institutional review board (IRB) of the University Psychiatric clinic of Ljubljana found no violation of ethical procedures and has approved the manuscript.

Funding

None; this project did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of interests

The authors have no conflict of interest to declare.

Acknowledgement

None.

References

1. Druss BG. Addressing the COVID-19 pandemic in populations with serious mental illness. *JAMA Psychiatry*. 2020;77(9):891–2, <http://dx.doi.org/10.1001/jamapsychiatry.2020.0894>.
2. Woloshin S, Patel N, Kesselheim AS. False negative tests for SARS-CoV-2 infection - challenges and implications. *N Engl J Med*. 2020;383(6):e38, <http://dx.doi.org/10.1056/NEJMp2015897>.
3. Kelly BD. Coronavirus disease: challenges for psychiatry. *Br J Psychiatry*. 2020;217(1):352–3, <http://dx.doi.org/10.1192/bjp.2020.86>.
4. Long QX, Tang XJ, Shi QL, Li Q, Deng HJ, Yuan J, et al. Clinical and immunological assessment of asymptomatic SARS-CoV-2 infections. *Nat Med*. 2020;26(8):1200–4, <http://dx.doi.org/10.1038/s41591-020-0965-6>.
5. WHO Team. Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations. In: WHO Global 2020; <https://www.who.int/publications/i/item/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations/>. [Accessed 3 August 2020].
6. Amirian ES. Potential fecal transmission of SARS-CoV-2: current evidence and implications for public health. *Int J Infect Dis*. 2020;95:363–70, <http://dx.doi.org/10.1016/j.ijid.2020.04.057>.
7. Gupta S, Parker J, Smits S, Underwood J, Dolwani S. Persistent viral shedding of SARS-CoV-2 in faeces – a rapid review. *Colorectal Dis*. 2020;22(6):611–20, <http://dx.doi.org/10.1111/codi.15138>.
8. Wu J, Liu X, Liu J, Liao H, Long S, Zhou N, et al. Coronavirus disease 2019 test results after clinical recovery and hospital discharge among patients in China. *JAMA Netw Open*. 2020;3(5):e209759, <http://dx.doi.org/10.1001/jamanetworkopen.2020.9759>.
9. Kirkcaldy RD, King BA, Brooks JT. COVID-19 and postinfection immunity: limited evidence, many remaining questions. *JAMA*. 2020;323(22):2245–6, <http://dx.doi.org/10.1001/jama.2020.7869>.
10. Shore JH, Schneck CD, Mishkind MC. Telepsychiatry and the coronavirus disease 2019 pandemic-current and future outcomes of the rapid virtualization of psychiatric care. *JAMA Psychiatry*. 2020, <http://dx.doi.org/10.1001/jamapsychiatry.2020.1643>.