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# Schizophrenia as a Comorbidity in COVID-19 Infection in Indonesia

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**Abstract:** Schizophrenia is a mental disorder affecting almost 1% of the global population. COVID-19 makes schizophrenia patients more vulnerable to poor outcomes because of their immune system disorder. When a patient is diagnosed with COVID-19, they must isolate for at least 14 days. This is where consultation liaison psychiatrists have a great role to play, both in delivering the news and in helping the patients to cope during their illness. The way in which health workers communicate with the patients should also be adjusted during the pandemic to limit the spread of COVID-19. This is a case report of a male paranoid schizophrenia patient who was also diagnosed with COVID-19 during his hospitalization. We used consultation liaison psychiatry techniques to break the news of his COVID-19 diagnosis. The patient refused to be isolated at first, but finally agreed after we had explained the situation further to him. Telepsychiatry could be an alternative way to communicate with an isolated COVID-19 patient as long as both the doctor and the patient were comfortable with the method. We used it to communicate with the patient until his discharge from hospital and he seemed quite comfortable with it. This article aims to raise awareness of the possibility of COVID-19 infection in a schizophrenic patient and highlight the role of consultation liaison psychiatrists in delivering the bad news about COVID-19 infection. The use of telepsychiatry for a psychiatric patient who needs to be isolated due to COVID-19 could also be a safer and more comfortable way to communicate, for both the doctor and the patient.

**Keywords:** Consultation-Liaison Psychiatry, COVID-19, mental disorder, schizophrenia, telepsychiatry.

# 精神分裂症是印度尼西亚新冠肺炎感染的合并症

**摘要:**

精神分裂症是一种精神障碍，影响着全球近1%的人口。新冠肺炎使精神分裂症患者由于免疫系统紊乱而更容易受到不良结果的影响。当患者被诊断出患有新冠肺炎时，他们必须隔离至少14天。这就是咨询联络精神科医生可以发挥重要作用的地方，无论是在传递新闻还是帮助患者应对疾病方面。在大流行期间还应调整卫生工作者与患者的沟通方式，以限制新冠肺炎的传播。这是一名男性偏执型精神分裂症患者的病例报告，该患者在住院期间也被诊断出患有新冠肺炎。我们使用咨询联络精神病学技术来公布他的新冠肺炎诊断消息。病人起初拒绝隔离，但在我们向他进一步说明情况后终于同意了。只要医生和患者都对这种方法感到满意，远程精神病学可能是与孤立的新冠肺炎患者交流的另一种方式。我们用它来与患者沟通，

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直到他出院为止，他似乎对此很满意。本文旨在提高对精神分裂症患者感染新冠肺炎可能性的认识，并强调咨询联络精神科医生在传递有关新冠肺炎感染的坏消息方面的作用。对于因新冠肺炎而需要隔离的精神病患者，远程精神病学的使用对于医生和患者来说也可能是一种更安全、更舒适的交流方式。

**关键词:** 咨询联络精神病学、新冠肺炎、精神障碍、精神分裂症、远程精神病学。

## 1. Introduction

Coronavirus disease (COVID-19) was first reported at the end of December 2019 and declared as a pandemic around the world [1], [2]. This disease was first detected in Indonesia on March 2nd 2020 [3]. At the time of writing this article (July 29th 2020), there had been 104,432 confirmed cases of COVID-19 in Indonesia, with 4.76% mortality rate [4].

Schizophrenia is a mental disorder affecting almost 1% of the global population [5]. COVID-19 is of particular concern to people with schizophrenia, who have thinking process impairment and lack of self-care capability. Changes to daily routines, like extended quarantine and the fear of infection, could play a role as a triggering factor in people with schizophrenia [6–8]. COVID-19 affects both physical and mental health [9]. Consultation liaison psychiatry (CLP) is a subspecialty of psychiatry that gathers and integrates information from other specialties that are related to the patient. The role of the consultation liaison psychiatrist is very important in acknowledging and resolving mental disorders that may arise. A consultation liaison psychiatrist is expected to build a connection between the patient and the doctor, as well as the health care system [10].

## 2. Case Report

Our patient was a 59 year-old male. He was brought to the emergency room in May 2020 by his wife because he had displayed strange behavior since the previous day. He had been dancing and jumping around like a monkey while throwing things around inside his house after he felt something had happened inside himself that had turned him into a monkey king.

He had felt afraid for the previous three months because he thought people were spying on him. He stopped working and shut himself up at home. He once told his wife he had heard strange voices but refused to discuss it further. He had difficulty sleeping because he was afraid someone might break into his house while he was sleeping.

These complaints began after his wife and son refused to let him sell the family's house. He was angry and disappointed because he had already negotiated a high price for the sale of the house. Since then, he became easily angry and had even hit his wife, which he had never done before.

On his arrival at the emergency room the patient was conscious and well oriented, although he looked afraid and suspicious. He had non-realistic thought forms with delusions of control and suspiciousness. He had a history of auditory hallucinations and decreased volition, but his psychomotor was normal. PANSS (Positive and Negative Syndrome Scale) assessment was done to measure the severity of the disease and his PANSS was 79 with P (Positive symptoms) 24, N (Negative symptoms) 18, and G (General symptoms) 37, which indicated he was moderately ill.

Routine blood tests showed that his hemoglobin (Hb) was 12.5 g/dL (slightly decreased), AST level was 51 U/L (slightly elevated), ALT level was 46 U/L (normal), potassium level was 3.1 mmol/l (hypokalemia), and the other results, including renal function test, were within normal limits. He had a non-reactive COVID-19 antibody rapid test. His chest x-ray showed bronchitis and hyperaerated lungs, while his heart was within normal limits. He was hospitalized in the psychiatric ward, and we diagnosed him with paranoid schizophrenia.

On his fourth day of hospitalization, we did a COVID-19 Reverse Transcriptase-Polymerase Chain Reaction (RT-PCR) test with a specimen from the patient's nasopharyngeal swab, considering that he was a cook who had continued to work during the pandemic. His RT-PCR result was positive. We told the patient directly about the positive result and explained about the disease. When he heard the news, he looked a bit confused but he accepted that he was suffering from COVID-19.

He was bothered by the fact that he had to be placed in an isolation ward without being accompanied by anyone. He became angry because he could not be with his wife. This was of particular concern to him because he was not used to being alone with nothing to do. We tried to explain the purpose of isolation, and he eventually agreed to be isolated.

While he was in isolation, we interviewed him using telepsychiatry. We could communicate well using the intercom and monitor. He had neither auditory nor visual hallucinations during the hospitalization period and showed neither aggressivity nor impulsivity. He was not worried about his COVID-19 diagnosis

because he did not develop any symptoms. He had no fever, cough, or difficulty breathing. A second and a third RT-PCR test were done on the 14th and 20th days of admission. Both the results were negative. He was allowed to go home after 22 days of hospitalization and two negative RT-PCR tests.

## 3. Discussion

COVID-19 can be transmitted through the droplet, direct contact, and also aerosol [11]. COVID-19 is a disease with an incubation period of around five days and can have various symptoms [13]. The symptoms are not always the same among patients [14]. The most common symptom is fever. Respiratory symptoms could include breathlessness that could progress to ARDS (Acute Respiratory Distress Syndrome) [1], [10]. Digestive symptoms include nausea, vomiting, and/or even diarrhea, these symptoms could appear before or together with the respiratory symptoms [13]. Diagnosis of COVID-19 is made by conducting an RT-PCR test to detect the SARS-CoV-2 ribonucleic acid (RNA) from a patient's nasopharyngeal swab sample, while a serology test is done to detect antibodies (IgG and IgM) [1]. We can try preventing the disease by washing our hands, avoiding touching our face with unclean hands, practicing cough etiquette, wearing a mask, as well as by practicing physical distancing and avoiding crowds [1], [12].

In some cases, someone might get infected without any signs or symptoms. There might be no abnormality in the patient's lung computerized tomography (CT) scan results but his/her RT-PCR result might be positive [2]. In our case, the patient showed no symptoms of COVID-19 and even had a negative COVID-19 Ab Rapid Test result. This could have happened because the patient was in an incubation period or had passed the incubation period but simply did not develop a single symptom [2], [15]. An asymptomatic COVID-19 patient is as infectious as a symptomatic one [13]. He/she has to be quarantined for at least 14 days and obtain negative COVID-19 RT-PCR test results twice, with a 24-hour interval between the first and second test minimum before he can end his quarantine [7], [8]. Our patient took an RT-PCR test on his 14th and 20th days of isolation. Both the results were negative so the patient was allowed to end his isolation and be discharged.

COVID-19 makes schizophrenic patients more vulnerable to being infected. With their cognitive impairment, behavioral disturbances, and limited insight, schizophrenia patients have difficulty applying protocols for infection control and prevention [8]. COVID-19 has thus become an additional mental burden for schizophrenia patients. Social distancing brings a negative effect because they would not be able to interact with others in public places anymore [7], [8].

Schizophrenia patients who are also suffering from COVID-19 might have lower recovery chances because of their comorbidity and also the immunodeficiency related to schizophrenia [8]. Patients with a severe mental disorder such as schizophrenia also have an immunity system disorder because their leucocytes, which are responsible for antibody production, are suffering from disregulation. They also have an increased amount of pro-inflammatory cytokines that could cause chronic inflammation [16]. Anti-psychotic treatment needs special attention, considering the side effects that might come, such as swallowing difficulty, sedation, and also hypersalivation that could cause pneumonia and worsen the clinical signs of COVID-19 [8]. Some antipsychotics can cause leucocytes to decrease, antibody induction, and inflamation indicators' induction [16].

Consultation-Liaison Psychiatry (CLP) is a psychiatric sub-specialization that integrates information related to the patient's disease in order to be a "bridge" between patients and their doctors to help them acknowledge and treat mental disorders that their patients might be suffering from [17]. When we broke the news to our schizophrenia patient that he was also suffering from COVID-19, we used some techinques from CLP so the patient could bear hearing the bad news. The other goals were to make the patient able to accept the fact that he had to be isolated and to cope during his illness.

Considering the high infection rate of COVID-19, some adjustments need to be made to the way we communicate with patients. One of these adjustments is adopting the practice of telepsychiatry. By using telepsychiatry, the doctor does not meet the patient directly and can minimize the risk of infection from COVID-19. We have used telepsychiatry to communicate with a patient in an isolation ward as he was fully conscious, understood the purpose of using telepsychiatry, and felt comfortable with it. Even though telepsychiatry is most helpful, there are limitations that need to be considered. One of these is when the doctor has to break bad news to the patient. When we meet face to face with the patient, the doctor can give physical touch and support, but this is not feasible with telepsychiatry. Another limitation of telepsychiatry is the possibility of network disturbance causing the ineffective delivery of messages [17]. However, use of telepsychiatry should bring the doctor and the patient closer to each other.

## 4. Conclusion

An asymptomatic COVID-19 patient still needs to be in isolation. COVID-19 has added an extra burden to schizophrenia patients, both because of the disease itself and because of the isolation procedure of COVID-19. The role of the consultant-liaison (C-L) psychiatrist is important when breaking the bad news of the COVID-19 infection to the patient and when helping the patient cope during the COVID-19 illness.

The scientific novelty we tried to highlight in this case was the use of telepsychiatry. Usually we communicated face to face with the psychiatric patient to build a better rapport. However, due to the COVID-19 pandemic, we thought it would be wiser to change our communication method to prevent infection spreading. We tried using telepsychiatry with our initial psychiatric patient who had COVID-19 comorbidity and had been placed in an isolation ward. Telepsychiatry was a safer and more comfortable way to communicate both for the doctor and the patient. The patient was able to tell us how he felt and what was bothering him, and we were able to see his emotional affect. This was important in the psychiatric interview. Telepsychiatry can prevent health workers from contracting COVID-19 from a patient's droplets during direct interview, and it can remove the need for personal protective equipment (PPE) during an interview as PPE need only be used for procedures requiring direct interaction with a patient.

However, there are still some limitations surrounding our case. This was our first hospitalized psychiatric patient with COVID-19 comorbidity. We consider the use of telepsychiatry to communicate with the patient a success because he did not complain about any communication difficulties, and he was feeling better each day until he was discharged. However, we still need to use telepsychiatry with additional patients to observe whether they have different responses. Patients can have varied psychiatric illnesses and varied degrees of COVID-19 comorbidity, and personal adjustments are required when communicating with different patients.

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