



# Cognitive Behavioral Therapy in a Newly Diagnosed COVID-19 Patient with Insomnia due to Adjustment Disorder: A Case Report

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### **Abstract**

**Background:** COVID-19 patients are reported suffering from anxiety, depression, and stress which culminates in the form of insomnia, and becomes a typical comorbid in hospitalized patients. Sedative-hypnotic drugs usually used to treat insomnia may not provide a viable solution as it has inhibitory effects on the respiratory system. Previous research suggested that one-week Cognitive Behavioral Therapy improved sleep latency, night sleep time, and sleep efficiency of COVID-19 patients with insomnia.

**Case:** A case of 53-year-old female patient with moderate symptoms of COVID-19 suffered from sleeping problems was diagnosed with insomnia due to adjustment disorder. She was given medication for three days and was scheduled for one hour of cognitive behavioral therapy intervention everyday. CBT intervention also included scheduling a regular daily activity and sleep hygiene programme.

**Result:** There was no improvement from medication administered to help in relieving the insomnia symptoms. However, the patient was more able to sleep well on the sixth day of treatment, after five daily sessions of CBT, which was three days after stopping the medication.

**Conclusion:** These results confirmed the effectiveness of daily CBT in improving the patient's sleep quality and efficiency after one week, as suggested by previous studies.

**Keywords:** Cognitive behavioral therapy, COVID-19, Insomnia, Adjustment Disorder

**Terapi Perilaku Kognitif pada Pasien COVID-19  
Newly Diagnosed dengan Insomnia karena Gangguan  
Penyesuaian: Laporan Kasus**

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**Abstrak**

**Latar Belakang:** Pasien COVID-19 dilaporkan mengalami kecemasan, depresi, dan stres yang berujung pada insomnia, yang merupakan komorbiditas tipikal pada pasien yang dirawat inap. Obat sedatif-hipnotic yang biasanya digunakan untuk mengobati insomnia mungkin tidak memberikan solusi yang layak karena memiliki efek inhibisi pada sistem pernapasan. Penelitian sebelumnya menunjukkan bahwa terapi perilaku kognitif selama satu minggu dapat memperbaiki latensi tidur, durasi tidur malam, dan efisiensi tidur pasien COVID-19 dengan insomnia.

**Laporan Kasus:** Kami melaporkan kasus pasien wanita berusia 53 tahun dengan Gejala Sedang COVID-19 didiagnosis dengan Insomnia karena Gangguan Penyesuaian. Pasien diberikan obat selama tiga hari dan dijadwalkan untuk mengikuti intervensi terapi perilaku kognitif selama satu jam setiap hari. Intervensi menjadwalkan aktivitas harian yang teratur dan program kebersihan tidur.

**Hasil:** Pengobatan yang diberikan tidak membantu meringankan gejala Insomnia. Namun, pasien lebih bisa tidur nyenyak pada hari keenam pengobatan, setelah lima sesi CBT setiap hari, yaitu tiga hari setelah menghentikan pengobatan.

**Kesimpulan:** Hasil itu menunjukkan efektivitas CBT harian dalam meningkatkan kualitas dan efisiensi tidur pasien setelah satu minggu, seperti yang disarankan oleh penelitian sebelumnya.

**Kata Kunci:** Terapi perilaku kognitif, COVID-19, Insomnia, Gangguan penyesuaian

## Introduction

Coronavirus Disease-2019, also known as COVID-19, has negatively affected the general condition of patients as reported suffering from anxiety, depression, and stress.<sup>1,2</sup> One of the most common culmination of the aforementioned psychological problems manifests in the form of insomnia, which becomes a typical comorbid in hospitalized COVID-19 patients.<sup>1,3</sup> A systematic review revealed that 14 to 61% of COVID-19 patients deal with serious psychiatric and neuropsychiatric problems, and 34.32% of the cases were contributed by insomnia and sleep disorders.<sup>1</sup>

Insomnia may lower level of immunity which may impede COVID-19 recovery.<sup>3</sup> Furthermore, sedative-hypnotic drugs usually used to treat insomnia may not provide a viable solution as it has inhibitory effects on the respiratory system,<sup>3</sup> and so might not be

the most beneficial choice for COVID-19 patients. In general, insomnia is more prevalent in women than men; as such, patients of the aforementioned gender require special attention.<sup>3</sup>

Several studies suggested that one-week cognitive behavioral therapy (CBT) improved sleep latency, night sleep time, and sleep efficiency of COVID-19 patients with insomnia, and prevented the further development of acute situational insomnia into chronic insomnia.<sup>4,5</sup> Thus, this case report aims to analyze the importance of cognitive behavioral therapy intervention for COVID-19 patients who experienced insomnia during in-hospital treatment.

## Case

A 53-year-old woman was brought into the hospital and was diagnosed a COVID-19 with moderate symptoms. She was admitted

into the Intensive Care Unit because of hypoxemia and was referred to the psychiatry department because of sleeping problems. She felt difficulty in falling asleep, with an increase in sleep latency. She also could only sleep for one hour, before waking up and unable to continue her sleep. She used to have a regular sleep schedule from 9 pm to 5 am. She denied past histories of sleeping problems, as well as any use of sleeping medication to help her sleep before.

She also found it difficult to sleep due to lack of activity during treatment. She used to keep a busy work schedule, serving as both a lawyer and an activist for children's rights. Furthermore, she was also actively involved in religious services. With all her previous involvement in multiple fields, she was not used to the idle time she had while being treated in the ICU. Additionally, not only was she unable to take the news of being infected with COVID-19 well, but also burdened with the fact that she could not fulfill her work obligations.

She was diagnosed with Insomnia due to Adjustment Disorder, and was given Clobazam for three days to help her sleep. General practitioners were instructed to help her with cognitive behavioral therapy intervention, which was the standardized practice for both primary and comorbid insomnia.<sup>6</sup> The patient was also arranged to have counselling sessions with a psychologist.

## Case Discussion

Cognitive behavioral therapy concerned several measures during the patient's hospitalization. The initial step was to give the patient's family understanding of the patient's condition and measures taken in CBT to gain family consent in aiding the patient's recovery process.<sup>7</sup> It was imperative in CBT to involve the patient's family to deliver moral support to speed up the patient's recovery.<sup>7</sup>

Furthermore, CBT also consisted of recognizing the patient's distortions in thinking which created problems, and assisting the patient to acknowledge it.<sup>7</sup> This would eventually lead to reevaluation in light of reality.<sup>7</sup> Specifically, the patient's distortions in thinking came from her strong belief that her work was a form of service to God, and that God tasked her life with a mission to defend the marginalized in law. Unfortunately, her strong belief led to insomnia as she felt guilty for having to abandon her life calling as she had to be quarantined in the hospital. The intervention then included changing her mindset to

think that the quarantine was an opportunity from God for her to take a break and think of the next step to do something bigger.

Another issue that caused the patient's insomnia stemmed from her lack of activities as she was regularly a busy person.<sup>7</sup> The solution of this particular condition was to design an activity schedule for the patient, including allowing her to work even though for a limited time.<sup>7</sup> Thus, she could still resort to handle some cases using her mobile phone. In addition to this, she could still be in contact with her family via a phone call for one to two hours every day.

Besides the aforementioned intervention, the patient was also daily evaluated in the evening by the doctor in charge. The patient would answer questions about her stress and mental condition. All parties related, such as the patient, her family and the medical team reached a mutual agreement to improve the patient's condition so that she could return to her work. The patient also committed to focus on her recovery, and to take the opportunity to recuperate.

Moreover, the patient also underwent a sleep hygiene programme which was customised based on the patient's condition. The programme included abstaining from afternoon naps, dimming the lights for sleeping and avoidance of electronic devices an hour before sleep.<sup>8</sup> Likewise, the patient was also advised to stop drinking caffeinated beverages at least six hours before bedtime and to resort to light carbohydrate snacks such as crackers and fruits one hour before sleeping.<sup>8,9</sup> The patient was suggested to pray or meditate to calm her mind and mental state to induce sleepiness.

After seven days of close observation, the patient did not experience desaturation so she could be transferred to a regular room. Then, the patient had an additional schedule consisting of light physical exercises such as morning jog and afternoon aerobic.

## Conclusion

CBT showed good result when applied clinically to solve insomnia problems in covid patient. Further studies, especially clinical trial, needs to be done to explore the effectiveness of CBT in managing insomnia on COVID patients.

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