



Acute and Transient Psychotic Disorder induced by fear of coronavirus infection

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ABSTRACT

Background: Acute and Transient Psychotic Disorder (ATPD) (ICD-10) is characterized by the sudden onset of psychotic symptoms and can be triggered by psychological stress. In the ICD-10 definition of ATPD, episodes are short-term, lasting from days to three months, followed by complete remission.

Objective: This paper reports the case of a 37-year-old woman with stress-induced new-onset psychosis instigated by fear of coronavirus infection.

Method: Physical examinations, paraclinical testing, and neuroimaging excluded an organic cause of symptoms. A thorough anamnestic investigation excluded the presence of other concomitant stress factors as the trigger of the patient's psychotic symptoms.

Results: In response to the COVID-19 lockdown, the patient developed excessive concern about coronavirus infection and, consequently, sleeping difficulties. Symptoms intensified, and she was admitted to the psychiatric ward, presenting with hallucinations, delusions, disorganized speech, and disorientation. The clinical picture fulfilled the diagnostic criteria of an Acute and Transient Psychotic Disorder. After one week of antipsychotic treatment, her symptoms had remitted, and the patient was discharged. Albeit, four months after treatment discontinuation, her psychotic symptoms re-emerged, and she was readmitted. The patient recovered from symptoms within 48 hours of treatment initiation with antipsychotics. She later reported to have been stressed and anxious while awaiting her coronavirus test result and, following, had doubted the negative result.

Conclusion: The present case supports previous reports describing the COVID-19 pandemic's effect on population mental health; the psychological stress caused by the fear of infection can lead to the debut of psychotic manifestations and ATPD.

Trastorno Psicótico Agudo y Transitorio inducido por temor a la infección por coronavirus

Objetivo: El Trastorno Psicótico Agudo y Transitorio (ATPD en sus siglas en inglés) (CIE-10) se caracteriza por el inicio súbito de síntomas psicóticos y puede ser gatillado por estrés psicológico. Según la definición de la CIE-10 del ATPD, los episodios son breves, durando desde algunos días hasta tres meses, seguido de remisión completa. Este artículo reporta el caso de una mujer de 37 años con una psicosis de nueva aparición inducida por estrés instigada por el temor a la infección por coronavirus.

Método: El examen físico, exámenes de laboratorio, y neuroimágenes excluyeron una causa orgánica de los síntomas. Una investigación anamnética exhaustiva excluyó la presencia de otros factores estresantes concomitantes como desencadenantes de los síntomas psicóticos de la paciente.

Resultados: En respuesta al confinamiento por COVID 19, la paciente desarrolló una excesiva preocupación por la infección por coronavirus y consecuentemente, dificultades para dormir. Los síntomas se intensificaron y fue hospitalizada en el servicio de psiquiatría, presentando alucinaciones, delirios, discurso desorganizado y desorientación. El cuadro clínico cumplía con los criterios diagnósticos para un Trastorno Psicótico Agudo y Transitorio. Después de una semana de tratamiento con antipsicóticos, sus síntomas habían remitido, y la paciente fue dada de alta. No obstante, cuatro meses después de la discontinuación del tratamiento, reaparecieron sus síntomas psicóticos y fue re-hospitalizada. La paciente se recuperó de los síntomas a las 48 horas del inicio del tratamiento con antipsicóticos. Más tarde informó haber estado estresada y ansiosa mientras esperaba los resultados del test de coronavirus y a continuación había dudado de su resultado negativo.

Conclusión: El presente caso apoya reportes previos que describen el efecto de la pandemia por COVID-19 en la salud mental de la población: el estrés psicológico causado por el miedo a la infección puede conducir al debut de manifestaciones psicóticas y de ATPD.

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关键词

急性 and 暂时性精神障碍; 压力诱发的精神病; COVID-19 疫情

HIGHLIGHTS

- Psychological traumas can trigger the onset of an Acute and Transient Psychotic Disorder.
- The COVID-19 pandemic can juxtapose psychological trauma.
- Thus, the pandemic exhibits a potential threat to population mental health of both the vulnerable and healthy individuals.

因害怕冠状病毒感染而引起的急性和暂时性精神障碍

目的: 急性和暂时性精神障碍 (ATPD) (ICD-10) 的特点是精神病症状突然发作, 可由心理压力触发。在 ICD-10 对 ATPD 的定义中, 发作是短期的, 持续数天到三个月, 然后完全缓解。本文报告了一名 37 岁女性因害怕感染冠状病毒引发的压力诱发新发精神病的案例。

方法: 体检, 临床旁测试和神经影像学排除了症状的器质性原因。彻底的回忆调查排除了其他伴随压力因素的存在作为患者精神病症状触发因素。

结果: 为了应对 COVID-19 封锁, 患者过度担心冠状病毒感染, 从而导致睡眠困难。症状加重后, 她被送进精神病房, 表现为幻觉, 妄想, 言语混乱和迷失方向。临床表现符合急性和暂时性精神障碍的诊断标准。经过一周的抗精神病药物治疗后, 她的症状有所缓解并出院。尽管如此, 在停止治疗四个月, 她的精神病症状再次出现, 她再次入院。患者在开始使用抗精神病药物治疗后 48 小时内从症状中恢复。她之后报告, 在等待冠状病毒检测结果时感到压力和焦虑, 随后对阴性结果有所怀疑。

结论: 本案例支持先前描述 COVID-19 疫情对人群心理健康影响的报告; 因害怕感染而引起的心理压力会导致精神病表现和 ATPD 的出现。

1. Introduction

Stressful life events can trigger the onset of Acute and Transient Psychotic Disorders (ATPD). ATPD are characterized by the sudden onset of psychotic symptoms, e.g. delusions, hallucinations, and perceptual disturbances within two weeks, followed by complete recovery within three months (World Health Organization, 1992).

2. Case

A 37-year-old woman without known mental illness was involuntarily hospitalized due to the acute onset of psychotic symptoms. The patient worked full-time as a store manager and had a thriving social life. She had no drug abuse, and she was not on any medication.

Upon admission, the patient was observed talking to an imaginary person. She seemed to believe that the doctor was a camel and the nurse was Mickey Mouse. She exhibited disorganized speech, repeating words as 'red,' 'brown,' and 'yellow,' and could not engage in conversation. Furthermore, she exhibited transient episodes of spatio-temporal disorientation.

The patient could not cooperate with the routine physical examination. She became physically aggressive and was treated with intramuscular (i.m) diazepam with limited effect.

The sister reported that the patient had begun to express excessive concern about coronavirus infection one week before the onset of symptoms and had cancelled a family gathering, fearing she was a carrier of the virus. However, she did not have any symptoms.

Her vital signs were normal, except pulse (104). Blood work was normal, and a urinalysis was negative, also for psychoactive substances. Following admission, she stopped drinking and became hypotensive; hence, she was transferred to the intensive care unit, where thorough diagnostic workups were performed under physical restraint.

An organic cause, infectious or autoimmune encephalitis, and paraneoplastic syndrome were suspected. However, analyses of blood and cerebrospinal fluid (CSF) were normal. Computed tomography (CT) and magnetic resonance imaging (MRI) of the cerebrum were equally normal, as well as EEG (Table 1).

CT of the thorax, abdomen, and pelvis showed tumour-suspicious areas in the liver and right ovary; An ultrasound examination revealed haemangiomas in the liver and a benign cystic process in the ovary.

The patient was treated with i.m aripiprazole, and olanzapine pro necessitates (p.n). After four days of treatment, her symptoms had remitted, but she had no recollection of the episode. She reported that she had become increasingly anxious after the COVID-19 lockdown and developed constant thoughts of contagion and sleeping difficulties.

Table 1. Organic differential diagnoses.

| | Examples | Investigations | Patient results |
|---------------------------|--|--|---|
| Intracranial disorder | Traumatic head injury, stroke, subdural haematomas, cerebral tumours | CT/MRI-head | Normal |
| Endocrine disorder | Hyper/hypothyroidism | Thyroid hormone levels, serum calcium | Normal |
| Infectious disorder | Neuroborreliosis, meningitis, encephalitis | CFS; cell count, protein/ glucose levels | Normal |
| Autoimmune disorder | Paraneuroplastic encephalitis/ NMDA-receptor encephalitis | CFS; antibodies titres, MRI-head | Normal |
| Paraneuroplastic disorder | Teratomas | CT-TAP, CA-125 levels, ultrasound | Benign cystic process in the right ovary, haemangiomas in the liver |
| Seizure disorder | Seizures, epilepsy | EEG | Normal |

CT; computed tomography, TAP; thorax, abdomen and pelvis, MRI; magnetic resonance imaging, CSF; cerebrospinal fluid, CA-125; cancer antigen 125, EEG; electroencephalograph.

The patient was diagnosed with ATPD without symptoms of schizophrenia (ICD-10:F23.0). She was discharged with p.o. Olanzapine and regular follow-up consultations. One month post-discharge, there had been no signs of relapse, and treatment was discontinued.

Four months later, the psychotic symptoms re-emerged. She was readmitted and treated with i.m aripiprazole and olanzapine p.n. Within 48 hours, the symptoms had remitted. Again, she had an imperfect recollection of the episode but reported to have been anxious and feeling infected with coronavirus in the days before readmission.

The patient was discharged to continue treatment with peroral olanzapine. Two months post-discharge, she reported feeling stressed, suffering from sleep disturbances, and a growing feeling of sadness, albeit she did not fulfill the diagnostic criteria for severe depression. An antidepressant was added to her treatment (mianserin 10 mg daily). Since then, there have been no signs of deterioration.

3. Discussion

A 37-year-old woman without any known mental illness was admitted to the hospital with new-onset psychosis. She presented with polymorphic psychotic symptoms; fluctuating hallucinations and delusions, disorganized speech, and transient disorientation. Hence, organic delirium was suspected. However, blood work, CSF analyses, and neuroimaging were without pathological findings, and findings on CT-tap were unrelated to the patients' symptoms.

The clinical presentation fulfilled the diagnosis of an ATPD without symptoms of schizophrenia. (World Health Organization, 1992) A thorough anamnesis revealed that the patient had been anxious and suffered from an excessive concern of coronavirus infection. It also excluded the co-occurrence of competing stress factors before hospital admission.

A multicenter study of patients with brief psychotic episodes triggered by the COVID-19 pandemic found that most of the patients were caucasian women in their 40ties. Prominent psychotic features included hallucinations, delusions, and disorganized speech, as observed in the present case (Valdes-Florido et al., 2021).

ATPD is associated with diagnostic shifts to schizophrenia and bipolar disorder years from the debut. The recurrence of psychotic symptoms four months after the discontinuation of the antipsychotic treatment raises the suspicion of an underlying chronic psychotic illness (Lopez-Diaz, Fernandez-Gonzalez, Lara, Crespo-Facorro, & Ruiz-Veguilla, 2021). However, the patient did not present with schizophreniform symptoms. Although she presented with some maniform symptoms,

transient sleeping difficulties, and pressure to speak, no anamnestic information indicated manic episodes.

Following her second admission and last admission, she developed light signs of depression; hence an antidepressant was added to the treatment in November 2020. Since the medical adjustment, there has been no re-emergence of psychotic symptoms. Even so, it is still too soon to have a longitudinal view of the case.

The psychological impact of the COVID-19 pandemic on populations' mental health has been described in several articles (Gunnell et al., 2020; Holmes et al., 2020). In this present case, the psychological stress related to the COVID-19 pandemic manifested as severe anxiety developing into a psychotic state fulfilling the diagnostic criteria of ATPD.

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Ethics statement

There is no reviewed board information to share.

Informed consent

The patient has given her informed consent in writing.

Data availability statement

Due to the nature of this research, supporting data is not available.

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References

- Gunnell, D., Appleby, L., Pirkis, J., John, A., Kapur, N., Yip, P. S., . . . Arensman, E. (2020). Suicide risk and prevention during the COVID-19 pandemic. *The Lancet Psychiatry*, 7, 468–471. doi:10.1016/S2215-0366(20)30171-1
- Holmes, E. A., O'Connor, R. C., Perry, V. H., Tracey, I., Wessely, S., Ballard, C., . . . Bullmore, E. (2020). Multidisciplinary research priorities for the COVID-19 pandemic: A call for action for mental health science. *The Lancet Psychiatry*, 7, 547–560. doi:10.1016/S2215-0366(20)30168-1
- Lopez-Diaz, A., Fernandez-Gonzalez, J. L., Lara, I., Crespo-Facorro, B., & Ruiz-Veguilla, M. (2021). Prognostic

significance of psychotic relapse in patients with first-episode acute and transient psychosis: New empirical support for ICD-11. *Journal of Psychiatric Research*, 137, 486–490. doi:10.1016/j.jpsychires.2021.03.023

Valdes-Florido, J. M., Lopez-Diaz, A., Palermo-Zeballos, F. J., Garrido-Torres, N., Álvarez-Gil, P., Martín-Gil, V. E., . . . Ruiz-Veguilla, M. (2021). Clinical

characterization of brief psychotic disorders triggered by the COVID-19 pandemic: A multicenter observational study. *European Archives of Psychiatry and Clinical Neuroscience*. doi:10.1007/s00406-021-01256-w

World Health Organization. (1992). *The ICD-10 classification of mental and behavioural disorders: Clinical descriptions and diagnostic guidelines* (pp. 87). Geneva: Author.