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## BACKGROUND

- The COVID-19 pandemic is one of the most challenging public health emergencies over the last decade. The uncertainty of its prognosis and mode of transmission led to widespread panic compounded by unfamiliar public health measures, service shortages, and financial losses. These stressors could contribute to an increased risk of psychiatric illnesses (1).
- An area of clinical concern is the potential of the pandemic's psychological context to trigger psychotic disorders and influence their symptomatology. A review of contemporary epidemics and pandemics psychosis research found no evidence of changes in the form and content of psychotic symptoms (2). However, researchers have already sounded the alarm on how the COVID-19 pandemic may disproportionately affect the mental health of patients with psychotic disorders (3'4).
- We report two cases with first-episode psychosis and two relapse cases, with symptomatology related to the COVID-19 Pandemic. All four attended the South Lee Mental Adult Health Service (SLMHS) in Cork city between May and July 2020.

### CASE 1

- 42-year-old male with a background of depression and multiple sclerosis in full remission. He became increasingly concerned about contracting COVID-19, spending hours researching online, and contacting his GP and COVID-19 information helplines.
- He presented to the ED several times, where COVID-19 swab tests were negative. He was temporarily reassured until he became worried that the hospital visits had exposed him to the virus. He became convinced that he will infect his wife, and they would both die.
- He eventually attended a mental health professional and was commenced on an SSRI. His condition worsened, and he began to express feelings of guilt and hopelessness. On the day of admission, he decided to take his own life and drove his car at speed into a wall. He was brought to ED by the Gardai.
- He was treated for a vertebral fracture and was then transferred to the Mental Health Unit. The impression was **severe depression with psychotic features**. He was treated with a combination of olanzapine, venlafaxine, and mirtazapine. His agitation and suicidal thinking resolved, and his symptoms of delusional guilt and hypochondriasis gradually abated.

### CASE 2

- 49-year-old admitted involuntary to the Adult Mental Health Unit after his partner contacted the Gardai expressing concern for his mental state. Members of the public had also been in contact with the Gardai with concern regarding his erratic behaviour in recent weeks. He has a history of recurrent depressive episodes with one previous admission.
- Since the start of the outbreak, he had become preoccupied with COVID-19. He had begun studying preventive medicine, spent at least 2000 Euro on over the counter flu medications, and 100 Euro on face masks. He had been handing out face masks to the public and spreading large amounts of salt on the floor for sanitization.
- On admission, he was wearing full PPE and was disinhibited, irritable, and grandiose stating that he could cure COVID-19. His presentation was consistent with a **manic episode with psychotic symptoms**. His antidepressant (fluoxetine) was discontinued, and he was commenced on olanzapine. He improved, his preoccupation with COVID-19 abated, and after four weeks, he was discharged in full remission.

### CASE 3

- 53-year-old single woman admitted previously with first episode of psychotic depression. She had been living with her elderly mother, who was cocooning due to COVID 19.
- She began to worry that she would acquire the virus and transmit it to her mother and as her mental state deteriorated, she became convinced that she is "patient zero" in Ireland. She contended that this was a punishment from God, as she had turned away from him. She reported feelings of guilt and hopelessness, stopped looking after herself, and was confined inside her room.
- The assessment was consistent with **relapse of depression with psychotic features**. Her symptoms did not improve despite optimizing the doses of her medications. After switching to lithium, her mood started to improve. By four weeks, she had become less preoccupied with COVID-19. Her delusions abated completely and by six weeks, she was in full remission.

### CASE 4

- 45-year-old single female with a background of Bipolar Affective Disorder stable on lithium treatment. Presented with low mood, poor sleep, and lack of motivation.
- She became convinced that COVID-19 was not a real virus, and the news around it was fabricated. She claimed that it was a social experiment by the Irish government that is meant to bring about positive cultural change. She wrote a letter to her family, claiming that she will be euthanized by the government after exposing this conspiracy.
- On assessment, she presented as distressed, labile, and irritable. Her speech was pressured with flight of ideas. Her presentation was in keeping with a **relapse of mania with psychotic and mixed affective features**. Her lithium dose was increased, and she was commenced on olanzapine with good effect. Her psychotic symptomatology progressively improved until full remission three weeks later.

## DISCUSSION

- In this case series, we describe the presentation of four individuals who developed COVID-19 related delusional beliefs. The exact nature of the delusion varied; however, a common theme was excessive fear of contracting and transmitting the virus. There are several psychological, cognitive, and biological theories of delusion formation; however, current events have always featured in various delusional themes throughout history.
- The two new-onset cases were notable for occurring in men in their 40's, who initially were anxious about COVID-19 but who went on to develop delusional beliefs relating to COVID-19. The two relapse cases had recent episodes with similar presentations (affective episodes with psychotic symptoms); however, the contents of their delusions were different.
- There are other case reports on COVID-19 delusional themes in patients with schizophrenia (5) and patients with no history of mental illness (6), which means that this phenomenon is not exclusive to affective disorders. Exposure to psychosocial stressors in the year prior to presentation has been associated with a higher risk of incident and recurrence of mania (7). In support of this, there have been isolated case reports of manic episodes precipitated by the stress of COVID-19 (8'9).

## CONCLUSION

- This report shows the potential impact of COVID-19 on the clinical presentation of patients with affective psychosis.
- Further research should examine those biopsychosocial COVID-related factors that predispose to, precipitate, and perpetuate psychosis.

### References

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