

## Venlafaxine Induced Psychosis: A Case Report

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### Introduction

A 65-year-old widow diagnosed with the recurrent depressive disorder had not been on medication for the last 3 years. She presented feeling sad, having reduced appetite, poor sleep, and excessive worry about her grandson for 3 months.

She had been re-started on fluoxetine 20mg daily by her area mental health clinic. There had not been a noticeable improvement a month after commencing fluoxetine, and he was admitted to the psychiatry unit at Colombo South Teaching Hospital. A diagnosis of severe depression with psychotic symptoms was made as she had mood-congruent persecutory delusions in addition to the depressive symptoms. She has commenced on Venlafaxine 37.5mg and titrated to 150mg within three days. Risperidone 0.5mg nocte was added for the psychotic symptoms. All basic investigations, including thyroid functions, were routine.

Three days after admission, she developed a persecutory delusion regarding the ward staff and patients that they were plotting against herself and her family, which was not in keeping with her mood. The risperidone was increased to 1mg bd.

### Discussion

This patient presented with severe depression with psychotic symptoms that were mood congruent. Despite being on an antipsychotic, she was found to be developing an increase in paranoid symptoms that were mood incongruent which coincided with the rise in the dose of Venlafaxine. The psychotic symptoms disappeared entirely after stopping the Venlafaxine but while being on risperidone.

The antidepressant Venlafaxine is a serotonin–norepinephrine reuptake inhibitor (SNRI) used to treat severe depression and is available at all government hospitals. SNRIs concomitantly block serotonin transporters (SERT) and norepinephrine transporters (NET). NET inhibition increases the synaptic norepinephrine and dopamine levels simply because NET has a greater affinity for dopamine than norepinephrine. Thus, SNRIs having two-and-a-half mechanisms of action boost norepinephrine throughout the brain and

Subsequently, she developed visual and auditory hallucinations. She claimed she saw a Buddhist priest entering the ward, large animals outside, and started seeing unknown people coming to abduct children and was in severe distress. She had third-person auditory hallucinations where she heard her neighbors calling her mad. Despite the increase in paranoia, she was well-oriented. The emergence of psychotic symptoms necessitated the diagnosis to be reconsidered; thus, all her basic investigations were repeated, and a non-contrast CT scan of the brain was done to exclude an organic cause. A neurologist's opinion was also sought.

It was noted that the paranoia coincided with the increase in Venlafaxine. Therefore, Venlafaxine was reduced to 75mg mane, and risperidone was continued. The auditory hallucinations reduced in intensity but not the delusions. Therefore, Venlafaxine was further reduced to 37.5mg mane. Within 3 days, her persecutory delusions diminished, and the hallucinations were absent. However, her depression continued, and she was re-started on fluoxetine 20mg mane. Gradually her psychotic symptoms disappeared, and her depression improved.

increase dopamine in the prefrontal cortex. Though the SERT blockade begins at lower doses, the NET blockade occurs only in higher doses [1]. The accumulated dopamine might be the cause of these psychotic symptoms.

There have been very few reports of venlafaxine-induced psychosis. However, none have reported the emergence of psychotic symptoms while on an antipsychotic.

Safeekh et al. [2] reported a case where a patient with social phobia developed delusions of persecution when treated with Venlafaxine 150 mg/day.

Unsal [3] had reported a 48-year-old man with major depressive disorder, anxiety disorder not otherwise specified, and benzodiazepine and amphetamine dependence who started experiencing auditory hallucinations, visual hallucinations, and perceptual distortions after he had increased his usual Venlafaxine

dose from 300mg/day to 600mg/day. His delusions have resolved after reducing the amount to 225mg/day.

According to Adamou and Hale [4], a 39-year-old lady with major depressive disorder developed delusions of love twice when treated with Venlafaxine at 225-300 mg/day. On each occasion, the illusions were remitted when the Venlafaxine was reduced to 75-150mg/day. Angheliescu et al. [5] reported visual hallucinations in a lady with posterior cerebral artery infarction after she was commenced on Venlafaxine.

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Theoretically, dopamine accumulation of Venlafaxine occurs only in high doses. However, this case shows that even in low - moderate quantities, Venlafaxine can produce dopamine accumulation resulting in psychotic symptoms. The emergence of psychotic symptoms occurred despite the patient being on a low dose of an antipsychotic. Further, there were no drug interactions or other causes for the emergence of psychotic symptoms. Rechallenge with Venlafaxine was not needed as the patient improved on fluoxetine. This report emphasizes psychosis as an adverse effect of Venlafaxine.