

Visual and Auditory Hallucinations During Normal Use of Paroxetine for Treatment of Major Depressive Disorder

To the Editor: Selective serotonin reuptake inhibitors (SSRIs) are effective and safe for the treatment of depression because they produce fewer side effects. However, several psychiatric side effects, including hallucinations, have been reported during treatment with SSRIs so far.¹ To the best of our knowledge, only two reports have described hallucinations during the use of paroxetine. One has shown visual and auditory hallucinations due to the excessive intake of paroxetine in dissociative disorder without organic lesions and another has shown visual hallucinations during the adequate use of paroxetine in depression with mild cognitive impairments with the history of suspected fat embolism.^{2,3} We herein report on a patient with major depressive disorder without organic lesions, who had visual and auditory hallucinations during the typical use of paroxetine.

Case Report

The patient was a 38-year-old Japanese man diagnosed according to *Diagnostic and Statistical Manual of Mental Disorders*, 4th Ed. (DSM-IV) criteria with major depressive disorder at 34 years of age; he has experienced symptoms of depression including depressive mood, insomnia, appetite loss, and general fatigue since he was 32 years of age. He had no past or family his-

tory of psychiatric disorders. His developmental history and intellectual capacity were within normal limits. He was started with amoxapine at a dose of 75 mg/day. Amoxapine was not effective, and it was thus discontinued by the patient himself within a few months. As his symptoms of depression gradually worsened, paroxetine was started at a dose of 20 mg/day when he was 37 years of age. Two months later, he began to experience visual hallucinations of the scenes of his own past experiences and auditory hallucinations of voices of unknown persons for the first time. Risperidone (2 mg/day) was prescribed for the treatment of his visual and auditory hallucinations; however, it worsened his depressive symptoms. He was referred to the department of neuropsychiatry of Kyushu University Hospital. Medical examinations, including MRI of the head, CBC, liver, renal, and thyroid function tests, showed no abnormalities. Electroencephalography showed dominant α rhythm, with a few slow waves, with no evidence of disturbance of consciousness. Paroxetine was tapered off carefully to avoid the discontinuation syndrome of paroxetine. As the dose of daily paroxetine was reduced, his visual and auditory hallucinations ameliorated. Paroxetine was discontinued in about 50 days. Thereafter, risperidone was discontinued in about 15 days. Sulpiride (200 mg/day), which is a dopamine D2 blocker and often used as an antidepressant in Japan, was then prescribed, and his symptoms of depression gradually ameliorated. His visual and auditory hallucinations completely disappeared about 50 days after the dis-

continuation of paroxetine (about 35 days from the time risperidone was discontinued). Since then, the patient has not experienced visual or auditory hallucinations for 1 year.

Discussion

Until now, several cases of hallucinations due to SSRIs such as fluoxetine, sertraline, paroxetine, and citalopram have been reported in the literature. In most cases, organic brain lesions and/or a synergistic interaction of SSRIs with other drugs such as dextromethorphan, zolpidem, oxycodone, and methylphenidate have been suggested.^{2,4-7} On the contrary, Tanaka et al. reported two cases of visual hallucinations improved by paroxetine in dementia with Lewy bodies.⁸ Two cases of hallucinations due to paroxetine intake have been reported so far. Schuld et al.³ reported a case of auditory hallucinations due to paroxetine (20 mg/day) in depression. This patient showed mild cognitive impairment, probably due to a fat embolism during a severe motorcycle accident. Kumagai et al.² reported a case of visual and auditory hallucinations in dissociative disorder. In this case, excessive intake of paroxetine (120 mg/day) by the patient herself was observed. Webb et al.⁹ reported a case of auditory hallucinations due to the off-label use of fluoxetine (20 mg/day) for depression in a 16-year-old boy without organic brain lesions. On the other hand, Capaldi et al.¹⁰ recently reported a case of citalopram-induced hallucinations and delusions in a young adult with posttraumatic stress disorder and associated depression, with no definite organic lesions. To

the best of our knowledge, the present case is the first report of hallucinations during the normal use of paroxetine in the absence of organic brain lesions. A "hyper-serotonergic/hypocholinergic" imbalance is generally known to induce hallucinations.¹ We clinicians should bear in mind that such imbalance can occur during the normal use of SSRIs, even in a patient without organic brain lesions.

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