

Manic Patient with Meningioma Treated with Low dose Risperidone and Valproic Acid

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저용량 리스페리돈과 발프로에이트로 치료된 뇌수막종에 의한 조증

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ABSTRACT

We describe the case of a 73 year - old female patient, YSG, who initially presented with a manic episode without any previous psychiatric history and was later diagnosed as having a meningioma in the left frontal lobe. YSG's symptoms were characterized by hyperactivity, insomnia, aggressive behavior with an auditory hallucination. She showed no abnormal signs on a complete neurologic examination. A gadolinium - enhanced MRI study showed a huge, extra - axial mass with homogenous enhancement in the left high convexity of the frontal lobe. Her manic symptoms subsided after administration of risperidone 1mg and valproic acid 500mg daily, for three weeks without surgical resection of the tumor. These findings suggest that YSG's mania might have resulted from the left - sided frontal tumor, and that her symptoms were treated rapidly by small doses of risperidone combined with valproic acid. Medical staff who care for manic patients should be aware of this possibility of a organic lesion without evidence of neurologic disease.

KEY WORDS : Mania · Left frontal · Meningioma.

Introduction

About half of brain tumor patients present psychiatric manifestations. Although complex symptoms may occur in relation with neurologic signs, neuropsychiatric symp-

toms may be the first clinical indication of a tumor. Usually, the right frontal lobe is considered to be related with secondary mania. We describe a patient with a left high-convexity frontal tumor who initially presented with a manic episode without any previous psychiatric history.

Case Report

A 73-year-old woman visited the emergency department because of hyperactivity, insomnia, auditory hallucination, and aggressive behavior of two-week period. During psychiatric interview, her consciousness was clear,

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but her speech was rapid and pressured, with flight of ideas. She needed little sleep during this period and talked continuously about the devil in a frightened manner (YMRS score=44). According to the medical records, she had been discharged from other psychiatric hospital six years previously after being treated for three weeks. Her son said “she was absolutely normal” after she discharged herself against medical advice. Laboratory data and neurologic data were unremarkable. Her psychiatric features fulfilled the diagnostic criteria of bipolar disorder, most recently manic state (code no. 296.4 ×), as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).¹⁾ Her diagnosis was confirmed by a structured interview using Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I).²⁾ Treatment was started with risperidone (1mg/day) and valproic acid (500mg/day). Four days after admission, gadolinium-enhanced MRI was performed to rule out brain organicity. A 4 × 4cm, extra-axial mass with homogenous enhancement was found in the left high convexity of the frontal lobe. Moderate periorbital edema was seen around the lesion, and some evidence of an encephalomalatic change implying an old infarct in the right middle cerebral artery territory (Fig. 1). Two neuroradiologists agreed on the diagnosis of meningioma with the MRI findings of dural-based, extra-axial mass with dense, uniform enhancement,³⁾ and with no evidence of metastatic tumor.

Twenty-one days after the drug trial, her auditory hallucination and hyperactivity had subsided (YMRS score=2) (risperidone 3mg/day, valproic acid 500mg/day). She was discharged on medication after 4 weeks of psychiatric admission. Surgical resection of her frontal mass was deferred because of her old age and stable general condition on relatively low dose psychiatric medication.

The patient was a ‘calm’ woman, who had lived as a housewife in a quite rural village for more than 50 years. Six years ago, she had visited a Christian prayer center for four days and subsequently showed the manic symptoms, which lasted for 3 weeks. During her medical history taking, she and her son could remember her dizziness symptom three years ago which might have been related to an old infarct injury sustained 3 years previously.

Discussion

This patient with a meningioma in the frontal convexity showed manic behavior as a presenting symptom, and was stabilized by low-dose risperidone and valproic acid. Tumors of the frontal lobe are frequently associated with neuropsychiatric symptoms. Some researchers have reported mental changes in as many as 90% of these cases.⁴⁾ The frontal lobe appears to consist of a variety of functionally distinct subregions. Injuries to the frontal convexities are usually reported to be associated with

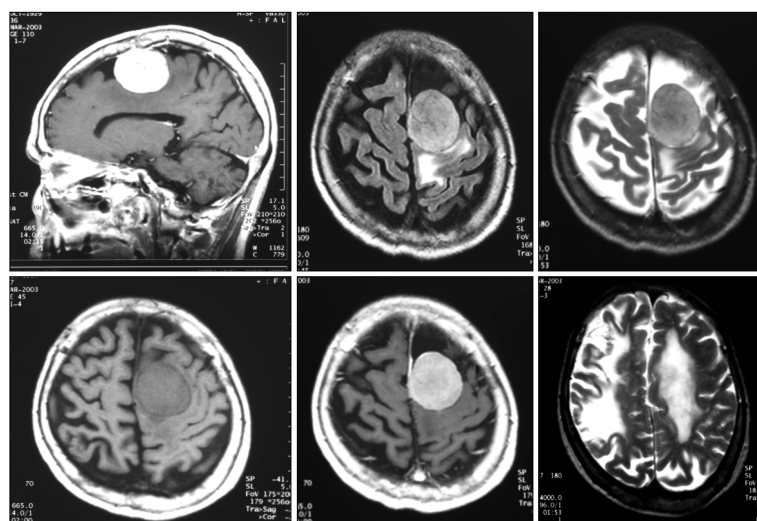


Fig. 1. MRI findings of the patient with manic symptom as a presenting symptom. 4 × 4cm size, extra-axial mass with homogenous enhancement was seen in the left high convexity of frontal lobe.

the so-called convexity syndrome, often presenting apathy, indifference, and psychomotor retardation. In this case, the patient had a left high convexity lesion and showed an elated mood, auditory hallucinations, and hostility. These symptoms are more resemble orbitofrontal syndrome, characterized by behavioral disinhibition, emotional lability, and irritability. Clark et al. reported that the underlying mechanisms of mania may be related to frontotemporal pathways interruption.⁵⁾ Whereas the right frontal lobes and the limbic area have been reported to be related to secondary mania,⁶⁻¹³⁾ However, there remains a possibility that a left-sided lesion may produce manic symptoms. Liu et al. reported that some left-sided lesion may produce manic symptoms¹⁴⁾ and there are also reports of cases with a left basal ganglia lesion.¹⁵⁾ Even though the patient's right-sided old infarct may correlate with the current manic symptoms, there is no temporal relationship between the onset of manic symptoms and the suspected onset of infarct injury. Based upon these data, authors concluded that the patient's manic symptoms were produced in relation to her left frontal mass. Any relationship with life events such as visit to prayer center should be ruled out by long-term follow up of the patient.

Conclusion

This case suggests that manic episode may be related to the convexity region of the frontal lobe. The manic episodes of brain tumor patients can be treated by low-dose risperidone and valproic acid. Medical staff who care for manic patients should be aware of the possibility that an organic lesion without evidence of neurologic disease might be responsible.

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