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•Case report•

Oligodendroglioma presenting as chronic mania

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Summary: Oligodendrogliomas may present with a variety of psychological symptoms but it only rarely presents with mania. The patient described in this case report is a 55-year-old man with a three year history of progressive mania who was initially diagnosed as chronic mania but a subsequent MRI identified a brain tumor. This report highlights the importance of considering differential organic diagnosis when patients present with atypical presentations of psychiatric disorders. A brain tumor should be considered and brain imaging studies conducted for patients with a late age of onset who do not respond to appropriate medication.

Keywords: oligodendrogliomas; tumor; chronic mania; India

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1. Introduction

The diagnosis of an organic brain lesion may be difficult to make when mental symptoms are prominent. An intracranial mass may develop in the presence of a pre-existing psychosis or a psychosis may develop as a result of a brain mass. In both circumstances prominent mental symptoms may effectively mask the presence of an organic lesion. There are no specific psychiatric symptoms that suggest an organic lesion. Adjustment disorder, depression, and delirium are frequent psychiatric disorders in patients with cancer,[1-3] but in most cases these are secondary to the psychosocial effects of cancer or to the treatment of the cancer; only occasionally are such symptoms due to primary or secondary brain tumors.[3]

Manic symptoms are only occasionally associated with cancer and brain tumors.[1,2] This case report is about the occurrence of chronic manic symptoms related to an oligodendroglioma – a type of brain tumor that accounts for approximately 4% of all brain tumors.[4]

2. Case history

A 55-year-old male of average build with 12 years of education who was working as a clerk and living in a three-generation household in an middle-class urban community was brought to the psychiatric outpatient department at PGIMER, Dr Ram Manohar Lohia Hospital, New Delhi by his family. The chief complaint was a three-year history of irritability, dysphoric mood, increased activity level, increased sociability, decreased need for sleep, and delusions of grandiosity.

On interview, the patient and family members reported that these symptoms had gradually developed and become progressively worse over the prior 3 years without periods of remission. The problems started with a 2-hour reduction in sleep that had no apparent effect on the patient's concentration and energy. He then became increasingly irritable, losing his temper over minor issues. Then he started intruding in other people's work, giving advice without being asked. There was a significant increase in his socialization with others. He also became much more actively involved in religious activities; he would rise at 04:00 every morning and go to the temple where he would clean the temple and give money to beggars. Finally he started to become extravagant, demanding money from family members and physically fighting with them if they didn't give it to him. He often did not go to work. There had been no prior history of mania, depression or other mental disorder and there was no family history of mental disorders.

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The family had brought the patient to a variety of private psychiatrists over the three-year course of his illness but none of their treatments resulted in a significant improvement. Based on the assumption of a diagnosis of manic disorder, he had been treated with a variety of medications including six months of lithium (600 to 1200 mg/d, serum level 0.9 mEq/ml) combined with olanzapine (20 mg/d) which was subsequently augmented with sodium valproate (1000 mg/d) and – when found to be ineffective – then changed to haloperidol (30 mg/d). The family also took him to local faith healers with no effect. As a final resort, the family brought him to our psychiatric hospital.

Mental status examination at the time of the first outpatient visit to our hospital revealed an uncooperative male with increased psychomotor activity and poor personal hygiene. He was conscious and oriented to time, place and person. He was easily distracted and had difficulty concentrating. He was euphoric throughout the interview. He had grandiose delusions and delusions of persecution related to his job. His immediate and recent memory were impaired, he had a score of 18 (out of 30) on the Mini-Mental Status Exam (MMSE).[4] It was not possible to conduct a formal examination of his intelligence. He had no insight into his illness. The score on the Young's Mania Rating Scale (YMRS)[5] was 32 (out of a maximum of 60). The neurological examination did not reveal any significant findings. He was well nourished. Tone, power and coordination in all his limbs were normal. Superficial and deep tendon reflexes were within normal limits. No focal sensory or motor deficit was present.

Based on the history and examination a differential diagnosis of chronic mania and organic manic disorder was considered and a battery of laboratory examinations were ordered. His complete blood count, renal function test and liver function test were within normal limits. Serum electrolytes and thyroid levels were within the normal range. ECG was normal. Given the late onset of his condition (52 years of age), the failure to respond to three years of treatment with lithium and various antipsychotic medications, and the absence of abnormal laboratory findings, a decision was taken to undergo a magnetic resonance imaging (MRI) examination of the brain. The MRI scan showed a large, well-defined, lobulated lesion in the left temporoparietal lobe measuring approximately 5.1×4.2×4.2 cm. The lesion involved the posterior aspect of the left lentiform nucleus, the posterior aspect of left internal capsule, the insula, and the external capsule. Medially, it involved the left thalamus. Inferiorly, it extended to the level of the basitemporal lobe. A diagnosis of oligodendroglioma of the left temporoparietal lobe was made.

Following the MRI brain report, the psychiatric diagnosis of 'Chronic Mania' was revised to 'Mania Secondary to Oligodendroglioma of the Left Temporoperietal Lobe'. The patient was referred to the neurosurgery department and operated on within a week. For three months after the operation he was maintained on sodium valproate 1000mg/d. His manic symptoms showed significant improvement following the removal of the tumor but he had residual mild impairment in his concentration, memory and abstract thinking: three months after the surgery his YMRS score was 4 (out of 60) and his MMSE was 24 (out of 30). He was shifted to a position with less responsibility at his place of employment; he is currently working in the same office in a respectable position with satisfactory performance.

3. Discussion

The psychiatric presentation of brain tumors is well documented. Intracranial tumors may give rise to symptoms simulating depression, anxiety states, mania, or schizophrenia.[6] Slow-growing frontal meningiomas are usually the cause; they often receive prolonged psychiatric care before identification of the tumor. Psychiatric presentation of oligodendrogliomas is less common, but the insidious nature of the symptoms also delays identification of the tumor. In these cases, once a psychiatric diagnosis has been assigned, the case is less likely to be reviewed for possible organic causes. This is now a more common problem in low-resource settings in low- and middle-income countries where CT and MRI examinations are either not available or severely restricted due to cost.

It is rare for cancer patients to experience manic episodes.[1,2] We were unable to identify prior reports of oligodendrogliomas presenting with chronic mania in the medical literature, so this case is an example of a rare presentation of oligodendroglioma. The characteristics of the case that motivated us to proceed to a MRI examination was the late onset (52 years of age) and the lack of responsiveness to what appeared to be adequate doses of anti-manic and antipsychotic medications for an adequate duration of time. Significant improvement in manic symptoms following surgical removal of the oligodendrogliaoma is highly suggestive of the relationship between the manic symptoms and oligodendroglioma, though, the mechanism via which the tumor resulted in the manic symptoms remains unclear.

4. Conclusion

Perusal of the mental symptoms displayed in this case supports the general opinion that the type and characteristics of psychiatric symptoms accompanying intracranial masses do not provide much help in localizing the tumor. Primitive brain tumors that result in the insidious development of psychiatric symptoms are likely to be misdiagnosed or overlooked. Patients with such tumors are often referred first to psychiatrists, so it rests with the psychiatrist to identify the atypical elements of the case that suggest the need to exclude an organic etiology of the symptoms. Premature

exclusion of a differential organic diagnosis can result in the labelling of the case as 'functional' and, thus, greatly delay the recognition of the underlying condition. This case highlights a couple of atypical characteristics that should raise 'red flags' for psychiatrists: the late onset, the chronic progressive nature of the symptoms in the absence of depressive episodes or intervals of normality, and the failure to respond to appropriate medication. In the presence of such atypical features, a brain tumor should be considered and brain imaging must be done.

Conflict of interest
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Informed consent
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表现为慢性躁狂症的少突神经胶质瘤

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概述：少突神经胶质瘤病人可出现各种心理症状，但很少出现躁狂。本病例报告描述了一名 55 岁的男性，具有三年攻击性躁狂症病史，该患者最初被诊断为慢性躁狂但随后的 MRI 检查发现了脑肿瘤。本报告强调了在患者呈现非典型精神障碍表现时考虑不同器质性鉴别诊断的重要性。对发病年龄较晚的、对恰当的药物治疗没有反应的患者，应考虑脑部肿瘤并进行脑影像检查。

关键词：少突神经胶质瘤；肿瘤；慢性躁狂症；印度

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