

# Brain Tumors and Atypical Psychiatric Symptoms: Two Case Presentations

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**How to cite this article:** Akan M, Gonenir-Erbay L, Erbay MF, Unal S. Brain tumors and atypical psychiatric symptoms: two case presentations. Dusunen Adam The Journal of Psychiatry and Neurological Sciences 2018;31:326-328. <https://doi.org/10.5350/DAJPN2018310315>

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Date of receipt / Geliş tarihi: May 18, 2018 / 18 Mayıs, 2018

Date of the first revision letter / İlk düzeltme öneri tarihi: May 30, 2018 / 30 Mayıs, 2018

Date of acceptance / Kabul tarihi: June 26, 2018 / 26 Haziran, 2018



Dear Editor,

It is known that structural brain pathologies may result in psychiatric symptoms and behavioral changes. Just as the speed and duration of tumor growth can affect the intensity and course of symptoms, location is also often related to the symptoms (1). A changed mental state may be the first sign in about 15-20% of patients with brain tumor (2). These mental symptoms are more frequently seen in the form of personality change, emotional problems, or intellectual losses (3,4). When the first symptoms are psychiatric, confusion in diagnosis and problems in treatment can result.

This contribution presents two cases that began with atypical psychiatric symptoms that upon examination were found to be caused by brain tumors and describes findings from these cases and the path of differential diagnostic undertaken.

The first case was a female, 61-year-old patient. She was referred to our polyclinic after 7 months of increased amount of speaking, disorganized speech, insomnia, irritability, and grandiosity. After onset of complaints, she had been admitted as an inpatient to the psychiatric service of an external center for monitoring and treatment; when the complaints did not recede, she was referred to our center with a provisional diagnosis of schizoaffective disorder and bipolar affective disorder. On first assessment, the patient's affect was seen to be increased, speaking speed and amount and involuntary attention raised, and associations loosened. According to anamnesis received from the family, the patient had not suffered from any psychiatric illness previously.

She was admitted as an inpatient, and it was observed that her associations were derailed, with uncoordinated actions such as defecating in the bed or inserting her foot into the toilet, which did not match

the clinical picture of affective disorder and could not be identified as the premorbid stage of a psychiatric disease, and the symptoms had set on at an advanced age in a patient who did not have a family history of mental disease; therefore, it was decided to investigate organicity by cranial magnetic resonance (MR) imaging. The MR image showed a mass sized 70x56x65mm rooted in the suprasellar region, continuing into the meninx and stretching into the front of the 3<sup>rd</sup> ventricle and into the bilateral frontobasal region. The patient was referred to the neurosurgery department for consultation and operation. Pathology results reported a meningothelial meningioma. At postoperative assessment, the patient was found to be conscious, cooperative, and oriented during psychiatric examination. Speech was slow but goal-oriented. Her affect was assessed as depressive. After discharge, the patient came to the polyclinic once, when she did not show any of the preoperative complaints. As she did not attend follow-up subsequently, we have no information about her latest state.

Our second case was a 47-year-old male. He presented to the emergency department of our hospital with complaints of disorganized speech and behavior. At anamnesis, we learned that his complaints had begun around 1.5 months earlier with headache, indisposition, fatigue, desire to rest continually, unwillingness to go to work, pain and weakness in the extremities, and problems to walk. It was noticed that he was eating and speaking fast. Fifteen days later, disorganized speech and behavior were added to these complaints, which increased over the last few days, to the point that he became unable to walk. In his personal and family history, no record of any psychiatric disease was found.

As the patient had no previous history of psychiatric disease, the onset age was unusual, and

neurological symptoms like pain and weakness in the extremities and walking difficulties were present, contrast cranial MRI was performed, finding a mass of 71x63x51mm in the right temporoparietal region. The patient was admitted to brain surgery and diagnosed with a glioblastoma WHO grade 4. At postoperative assessment, the patient presented with a clinical picture of delirium in the psychiatric examination. Antipsychotic treatment continued, required environmental precautions were recommended, and he was treated and followed up for delirium. After 3 days, the delirium presentation receded. During follow-up, except for some neurological findings the psychiatric presentation was found to improve.

Frontal and temporal lobe tumors are more likely to cause psychiatric symptoms than parietal or occipital lobe tumors (5). In our cases, lesions were located in these areas, too, and symptoms presented with affective, speaking, and behavioral disorders. The interpretation of these pathological states as psychiatric diseases had led to a delay in diagnosis and treatment.

In some cases, psychiatric symptoms can be the only signs of brain tumors (6,7). In the absence of neurologic symptoms, it has been pointed out that in patients in their fifties, the first signs of meningiomas may be psychiatric (8,9). A comprehensive anamnesis, physical examination, and clinical suspicion are important for an early diagnosis. Neurological examination and brain imaging studies should be performed in the presence of symptoms such as memory deficits, atypical affect, speech and behavioral disorders, personality changes and atypical age for onset in new cases of psychosis (10,11).

Clarifying the relationship between psychiatric symptoms and the function of neuron groups at the anatomical location of a tumor may open new perspectives on the development of psychopathologies.

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