Psychiatric Symptoms in Brain Tumor

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ABSTRACT

Patients with structural brain lesions may sometimes present with a variety of psychiatric symptoms for a prolonged period of time without any neurologic symptoms and signs. In such cases the underlying pathology of such clinical picture can be easily misinterpreted to be functional in origin and can delay actual diagnosis as well as alter the prognosis. This report presents a case of elderly gentleman who presented with sudden onset atypical psychiatric manifestations with alteration in mood and behaviour which was diagnosed later on secondary to brain tumour involving both frontal lobes and corpus callosum. Hence we suggest that any atypical psychiatric manifestation in elderly patients warrants a detailed evaluation accompanied by neuro-imaging to rule out possible organic cause including tumours.

Keywords : Brain Tumour, Neuropsychiatry, Mood and Behavioural disorders.

INTRODUCTION

Brain tumours are commonly associated with neurological manifestations. However it is not common for these tumours to present with neurobehavioral changes in the absence of any focal neurological deficits. We report a case of 61 year old gentleman presenting with sudden onset change in mood and behaviour over 2 months. Neuro-imaging revealed large tumour possibly Glioblastoma Multiformae occupying bilateral frontal lobes and corpus callosum.

CASE REPORT

Mr X. a 61 year old gentleman, a retired government employee from rural background presented to us in December, 2012 with a sudden onset progressive course of illness over two months. The symptoms started with behavioural changes. The patient was noticed to be restless and roaming around aimlessly. He had spontaneous bouts of whistling, singing loudly, speaking out in different voices, use table, bucket and utensils to make thumping noise. His sleep reduced markedly. He showed over-familiarity and would become jocular by reciting TV advertisements which were out of context and amuse others. He would abruptly give a running commentary of a cricket match which was very unusual and unheard of him. This particular feature was also observed during course of ward stay. All above actions were unprovoked, impulsive and associated with agitation if interrupted from doing so. These symptoms lasted for 15-20 days followed by gradual reversal in his behaviour in form of withdrawn attitude, vacant staring, psychomotor retardation, reduced socialization and markedly reduced appetite. He remained apathic and had to be forced to do even basic self care activities.

Subjectively he complained of a low mood and expressed nihilistic ideas. Above symptoms were not associated with other mood or psychotic symptoms, substance abuse, any seizures, head injury, recent febrile illness or sensory-motor deficits. There was no history of headache, vomiting or other neurodeficits.

Initially he was diagnosed by local psychiatrist as late onset psychosis versus mood disorder and started on antipsychotics for two weeks but were poorly tolerated. There was no improvement and patient stopped taking oral feeds for 4-5 days leading to dehydration. Patient was a known case of hypertension detected two years ago when he had cerbrovascular attack with left sided hemiparesis. There was a history of one episode of post stroke depression of moderate severity lasting 4-6 months with spontaneous recovery without treatment. There was no past history of other psychiatric disorders. Family history was positive for mood disorder in elder sibling. At admission patient was medically evaluated and dehydration corrected and referred to psychiatry in view of behavioural abnormalities. General and systemic examination was within normal limits. Central nervous system examination was within normal limits except minimal residual motor weakness on left side. He was oriented to time, place and person. Mental status examination revealed averagely kempt general appearance, poor oral hygiene, psychomotor retardation, and a minimally cooperative attitude. Rapport was established with difficulty. Speech was non-spontaneous, monotonous, coherent and relevant with latency of response at times. Thought content revealed delusion of guilt. Mood was conveyed as sad, affect was inappropriate and restricted. Cognitive assessment revealed impaired immediate and recent memory, impaired conceptualization and judgement with absent insight. A differential diagnosis of dementia with behavioural and psychological symptoms versus late onset mood disorder possibly organic was considered though the presenting symptoms and signs were quite unusual. All baseline investigations were within normal range. Hemogram revealed no abnormality except Haemoglobin of 10.2gm%. MRI brain was then planned in order to rule out local pathology and past history of cerebro-vascular insult. Neuroimaging revealed high grade space occupying lesion involving B/L frontal lobes, Genu and Rostrum of Corpus Callosum approximately 4.5 × 5.5 cm in size on each side with structural pathology suggestive of possible Glioblastoma Multiforme (Fig. 1 and Fig. 2). Fundus examination suggested grade I hypertensive changes but no papilloedema. Thus diagnosis of organic mood disorder was confirmed as secondary to frontal lobe tumour. Patient was started on low dose Quetiapine (25-50 mg) in divided doses for symptomatic control. Neurosurgery consultation was initiated and patient was started on antiepileptics as prophylaxis. Patient was advised for tumour resection and prognosis was explained. Considering the prognosis and absence of any physical disability the family members refused getting operated and opted for palliative care management. Subsequently patient lost to follow up.

DISCUSSION

Above case illustrates how brain pathology in form of tumour presents with psychiatric symptoms in absence of any neurodeficit. As this patient had previous history of stroke followed by an episode of depression, current episode was assumed to be a part of the same spectrum initially. Mood disorders and cognitive decline in form of dementia are known to be precipitated by stroke. However considering the esoteric presentation of behavioural and mood symptoms, which were sudden in onset, unusual in presentation and not temporally correlated to previous medical condition led to suspicion of different aetiology. Hence it was immediately decided to proceed with neuro-imaging considering possibility of independent organic brain pathology. Though it is not uncommon for brain tumours to present with neuropsychiatric manifestations but purely mood and behavioural symptoms in elderly patients with other co-morbidities in absence of any localizing neurodeficits is more likely to be

suspected as of functional aetiology. The patient was diagnosed to have functional psychiatric disorder and treated on same lines before presenting to us.

Brain tumours can present as predominantly psychiatric manifestations in up to 10-100 % cases[1]. There have been attempts to categorize psychiatric symptoms in accordance with the location of the tumour For example Frontal lobe tumours are reported to manifest as abulia, personality change, and impaired judgement along with seizures, motor deficits, gaze abnormalities or incontinence. Similarly tumours in the temporolimbic areas can present in form of auditory and visual hallucinations, mania, panic attacks, or amnesia[2]. On other hand in areas such as the occipital lobe, corpus callosum, and intraventricular space, tumours can remain silent before they grow considerably and only produce transitory symptoms without localizing signs[3]. However a recent metanalysis by Madhusoodanan et al, 2010 revealed that these symptoms are not always specific to type, size or location of tumours[4]. Hence there can be delay in exact evaluation and diagnosis of the cause of the symptoms. Alternatively tumour like primary Glioblastoma Multiformae is commonly seen in older age group and can be very aggressive and rapidly progressive if untreated[5]. The scenario was similar in current case, where tumour got detected at a very late stage as it either remained clinically silent (considering its size at time of detection) earlier presenting later with only non-localizing psychiatric symptoms or it progressed rapidly during early phase of clinical presentation. Both these factors can deter the prognosis as it happened in our patient. Hence it is recommended that any change in the clinical presentation of patients with previous neuropsychiatric complications or the emergence of atypical psychiatric symptoms should be further explored through neuroimaging and other necessary investigations.

CONCLUSION

Brain tumours can be notorious to present with unusual set of symptoms. Atypical psychiatric symptoms and signs with rapid fluctuations, poor tolerance to medications, resistance to cure occurring in any age group, warrants a detail evaluation accompanied by neuro-imaging to rule out possible organic cause including tumours. Early detection has a direct influence on treatment options and quality of life of patients.

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