



GLIOBLASTOMA MULTIFORME PRESENTING WITH PSYCHIATRIC SYMPTOMS

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Abstract : BACKGROUND Tumours of the brain may present with symptoms resembling psychosis and depression. Glioblastoma is the commonest infiltrative astrocytoma. CASE REPORT Mr. K, 52 years, was brought by relatives reported with low mood, retarded activity, interest and concentration. He also featured with monosyllabic responses, postural difficulties, weakness of limbs and incontinence of urine. These complaints were preceded by vomiting and headache and there was no history of seizures, head injury or psychosis. He was recently diagnosed as diabetic 1 month back. On Central Nervous System examination, he presented with Left Lateral Rectus palsy, power of 4 out of 5 on Left Upper Limb and Left Lower Limb, apraxic gait, cortical bladder and bilateral papilloedema. On Mental Status Examination, he was lethargic with decreased psychomotor activity, monosyllabic responses, depressed mood and equivocal orientation and poor memory. Organicity was considered and MRI brain confirmed the diagnosis of Glioblastoma multiforme- grade IV which was correlated with histopathological studies. DISCUSSION This report illustrates the importance of ruling out the possibility of organic aetiology when confronted with the initial vague psychiatric symptoms in a person above 50 years without any preceding history of psychiatric disorder in the absence of family history. **CONCLUSION** This paper highlights the need and importance of the Liaison Psychiatry in General Hospital milieu.

Keyword : KEY WORDS Glioblastoma, astrocytoma, Organic Brain Syndrome, cognitive function, Liaison Psychiatry.

BACKGROUND: Tumours and other mass lesions of the brain may present with symptoms resembling psychosis/ depression viz with features of delusions, hallucinations, mania, or catatonia. There is diversity in the tumours of the central nervous system which in turn produces a spectrum of physical and psychiatric manifestations. It includes the primary and the secondary tumours. The incidence is ten times more for brain metastases than the primary tumour (Culine et al. 1998)^[1].

In the cohort of 73 patients with brain tumour, the presence of depressive symptoms was the single most important predictor of the quality of life (Pelletier et al.2002)^[16].

The symptoms include alteration in the level of consciousness, cognition, the affective state, personality changes, hallucinations, delusions, frank psychotic illnesses. The Karnofski score, a measure of performance status in cancer patients (with lower scores indicating greater disability), is inversely correlated with the severity of depressive symptoms (Bukberg et al. 1984)^[11]. Discussing about the neuropsychiatric symptoms, it is noticed that the constellation of symptoms varies with the location, histology, size of the tumour, presence or absence of raised intracranial pressure and the rate of tumour growth (Wen et al.2005)^[9]. The typical presentation includes headaches, papilloedema, seizures, focal neurological deficits or non specific cognitive or personality changes. But the real challenge lies when the atypical symptoms are more prominent. The psychological symptoms associated with malignancy such as fatigue and emotional setbacks may force the individual to seek psychiatric help.

Glioblastoma is the commonest and highest-grade infiltrative astrocytoma. It is usually associated with a bad prognosis. Histological grading is highly predictive of an aggressive behaviour, with a mean survival rate of 1 year. The histology of tumours influence the age of onset, as gliomas are more common in the middle aged population (Price et al.2005)^[4]. The association of genetic syndromes with cerebral tumours is well known. Increased rates of Gliomas are seen in neurofibromatosis. Glioma is also associated with Gardner's syndrome (Bondy et al.2005)^[3]. The mutations in the tumour suppressor genes may be the responsible factor in all these things. In few cases there is an excessive cell proliferation because of activation of oncogene.

There is a definitive relation between the rate of growth of tumour and the psychiatry symptoms. Fast growing tumours lead to cognitive defects, and the most rapid growth of tumours lead to acute organic reactions with impairment of consciousness. Whereas slow growing tumours tend to produce personality changes. Of all the psychological changes, cognitive dysfunction is the most commonly reported. Cognitive changes extend over a huge spectrum encompassing memory disturbances, deficits in problem solving, attention, psychomotor speed and visuospatial functioning, among other deficits.(Garofalo & Baum 2001)^[17]. More severe cognitive impairment may present in the form of dementia, with slowed and concrete thinking, impoverished associations, defective judgment, marked perseveration, incoherent and slowed speech, etc.

It is interesting to note that focal cognitive changes are commoner than generalized symptoms which emphasize the importance of the location of the tumour. Disturbance in the level of consciousness/delirium will increase the gravity of the cognitive disturbances. The consciousness fluctuates with periods of lucidity. Drowsiness and somnolence appear and progressively deteriorates to coma if untreated.

Depressive symptoms have an overall incidence of 20-25% which partly depends on the tumour location. The major stressor for these symptoms is the diagnosis of a life threatening illness. Significant depressive symptoms are associated with advanced stages of disease that produces severe disability and/or pain. Psychotic symptoms may occur with or without the evidence of paroxysmal activity. The nature of hallucinations will depend on the location of the tumour.

Delusions may be depressive, schizophrenic, paranoid and hypomania.

CASE REPORT:

52 yr old, flour mill worker, married, studied 10th, from Chennai suburbs, brought by wife & son reported with symptoms of low mood, retarded activity, declining interest, lack of concentration and absenteeism. On further probing, he featured with monosyllabic responses, postural difficulties, and weakness of limbs & incontinence of urine. The above set of symptoms was preceded with history of vomiting and headache 25 days back. There was no history of Seizures, head injury or CNS infections. Hallucinatory behavior, suspiciousness, inflated self esteem or suicidal tendencies.

He was recently diagnosed as diabetic 1 month back. There was genetic loading for malignancy in the family with his father succumbing to bone cancer and paternal uncle to lung carcinoma superadded with alcoholism. He was smoking for 10 years and quit since the onset of symptoms. Examination shows that Vitals-normal. Cardiovascular and respiratory system are normal. Per abdomen is soft. Central Nervous system- Right handed person, Cranial nerves normal except for Left Lateral Rectus palsy. Spino- motor system- Tone, bulk normal on both sides, power of 4/5 on Left Upper Limb & Left Lower Limb. Reflexes- normal. No sensory deficits. Fundus-bilateral papilloedema was present. Gait apraxia. Cortical bladder, No cerebellar signs MSE-Patient is lethargic, entered exam room supported by son, dressed in dhoti and shirt, not shaven. Not cooperative, eye contact made but not maintained. No tics/tremors/mannerisms. Psychomotor activity was decreased. Talk-Quantum, tone and rate are decreased, Reaction time is prolonged. Mood-depressed. Orientation responses were equivocal, poor comprehension, poor memory.

A diagnosis of Organic Brain Syndrome was made. MRI Brain revealed large heterogeneous Space Occupying Lesion with solid and cystic components arising from right frontal & temporal lobes showing heterogeneous enhancement of its solid and cystic components (after administration of IV contrast) and devouring the brain. A diagnosis of Glioblastoma multiforme- grade IV glioma which was confirmed with histopathological studies. Mr.K underwent Right Frontal Craniotomy & cyst tapping with partial excision of tumor and radiotherapy.

Image1

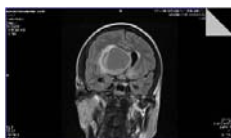


Image2

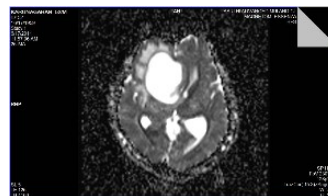
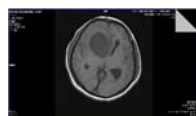


image 3



image 4



image 5

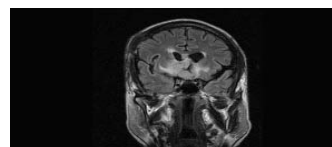


image 6

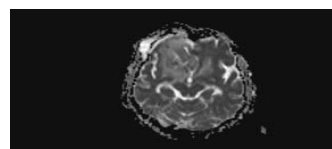


Image 7

•••••••• Images 1 to 5 MRI Brain pre operative images- showing large well defined, irregular, T1 hypointense/T2 hyper intense & T2 flair partially suppressible mass lesion with surrounding minimal edema noted in Right Frontal Lobe in para sagittal plane showing diffusion restriction, No evidence of hemorrhage/ calcification; the lesion causing mass effect in the form of effacement of right lateral ventricle and dilatation of left lateral ventricle with midline shift to the left. Images 6 and 7- MRI Brain post operative images : Gliotic changes, noted in Right Frontal Lobe with post operative changes in bone and scalp in right frontal region, no evidence of residual mass

DISCUSSION:

This case illustrates the need of the importance of ruling out the possibility of organic aetiology when confronted with the initial vague psychiatric symptoms in a person above 50 years without any preceding history of psychiatric disorder in the absence of family history of such symptom profiles.

In a population-based study^[13] conducted by National Centre for Register-based Research, University of Aarhus, Denmark, the results indicate an increased incidence of cancer, especially for brain tumours, small-cell lung cancer, in the first months after a first-time contact to a psychiatric hospital. Clinicians should be aware of the first-onset psychiatric symptoms such as mental slowing, forgetfulness and personality changes as warning signals of an intracranial tumour. In our case, the patient reported with symptoms of low mood, retarded activity, declining interest, lack of concentration and absenteeism. These were the first onset psychiatric symptoms.

Cerebral metastases, malignant astrocytoma and benign meningiomas are the most common types of brain tumour in patients over 65 years of age. The symptoms and signs of a brain tumour depend primarily on its location and on intracranial pressure. In our case, the patient presented with vomiting and headache which may or may not be due to increased intra cranial tension. This emphasises the need for doing a complete work up in the case of neuropsychiatric presentations.

In addition to producing dementia and seizures, tumours occasionally present in an apoplectic fashion and mimic the onset of stroke. In this case, he did not have any history of seizures.

Minski's (1933)^[10] report of psychiatric symptomatology among patients from the Maudsley hospital says that out of 58 patients with cerebral tumour, 25 of them showed functional mental illness and in almost half of these patients' physical signs were absent. But in our case, he featured with monosyllabic responses, postural difficulties, and weakness of limbs & incontinence of urine. This means that there might be a set of related and non related symptoms that would mislead us.

But a careful work up with radiology and histopathological evidences correlated with clinical diagnosis helped us to establish organic brain syndrome.

CONCLUSION:

We recommend closer scrutiny of psychiatric patients presenting with vague CNS symptoms for organic aetiology and early diagnosis would pave way for proper intervention and better care. This paper highlights the need and importance of the Liaison Psychiatry in General Hospital milieu.

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