CASE REPORT

Cerebral Metastasis Masquerading as Late onset Depression- A Case Report

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ABSTRACT

A case of a 63 year-old woman with no past psychiatric illness presented with 5 months history of depressive symptoms but minimal neurological signs and symptoms is discussed. She met the ICD-10 diagnostic criteria of depressive disorder. Chest radiograph revealed a radio-opaque lesion and CT scan brain showed a large frontal lobe mass that was neurologically silent. This case demonstrates that intracranial metastasis can manifest as late onset depression without significant accompanying neurological deficits.

INTRODUCTION

Metastasis to the brain is the most feared complication of systemic cancer and the most common intracranial tumor in adults. The incidence of brain metastasis is rising with the increase in survival of cancer patients. Approximately 40% of intracranial neoplasms are metastatic. Multiple, large autopsy series suggest in order of decreasing frequency that lung, breast, melanoma, renal, and colon cancers are the most common primary tumors to metastasized to the brain.[1] Metastatic spread to the brain occurs through blood circulation occurs mostly via arterial circulation; less often, it occurs via the Batson venous plexus (pelvic and GI tumors). Most metastases are round, well-demarcated lesions located at the junction of gray and white matter.[2] Cerebral tumors presenting with symptoms of raised intracranial pressure, focal neurological signs, or epileptic seizures are usually first seen by neurologist or neurosurgeons. Rarely, psychiatric symptoms may be the initial presenting features in patients with brain metastasis.

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The case was brought by relatives to see the psychiatrists because of the patient's psychiatric symptoms.

CASE REPORT

A 63 years old illiterate female from rural background presented to psychiatric OPD with features of lack of sleep, sad feelings, decreased social interaction, feelings of hopelessness and suicidal thoughts for past 5 months. She also reported of gradual onset of forgetfulness for the same period. Patients relative also reported that she talks irrelevantly sometimes for past few days. Past history of the patient did not reveal any significant psychiatric problems or any mental illness in her family. There was no history suggestive of DM/HT/TB/Cardiac problems/thyroid disorder. Her illness was followed after she lost money in business and had constant family problems in the past 2 yrs. She was a chronic smoker for many years but discontinued for many months.

Details physical and neurological examination did not reveal any significant findings. On MSE, she was found to be conscious, oriented, depressed mood and speech occasionally irrelevant but coherent. On the basis of positive clinical history, depressed mood and intact cognitive function in MSE which was precipitated by stressors before illness, we initially diagnosed the case as "Severe depression with psychotic features"

After she was diagnosed as depression, we initiated Escitalopam 5mg, antipsychotic Olanzepine 5 mg. Her condition was deteriorated further within next 2 weeks and she did not show any signs of improvement with the above treatment rather she complained of sudden onset of weakness on right side of body with difficulty in walking. She was readmitted again for proper evaluation and management.

All the routine investigations like Blood R/E, LFT, KFT, and RBS were within normal limits. Chest X-Ray revealed a mass occupying lesion on the right side of Chest. The patient was referred to Radiotherapy Dept for opinion. The USG whole abdomen and USG of B/L Breast advised and reports were found to be normal except Rt. Renal cortical cyst. CT scan brain showed solitary metastatic lesion in left frontal lobe. The final diagnosis was made as lung carcinoma with intracranial metastasis. The patient was finally shifted to Dept. of Radiotherapy for further management.

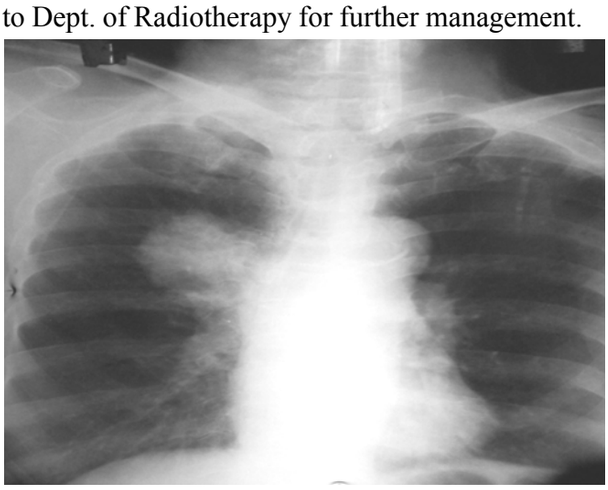

Figure 1. PA View Chest X-Ray showing a radio-opaque lesion on right upper lobe of lung.

Figure2: A round, cystic space occupying lesions with central hypodensity, perifocal edema, mass effect in frontal region.

Discussion

Lung cancer has the greatest predisposition for brain metastasis, the predominant type of intracranial neoplasm found in adults. Approximately two thirds of brain metastases are symptomatic at some point. Symptoms primarily are caused by [1]increased intracranial pressure resulting in headache, nausea, vomiting, confusion, and lethargy and [3]focal irritation or destruction of neurons resulting in hemiparesis, visual field defects, aphasia, focal seizures, ataxia, and other focal neurologic signs or deficits.

Suriya A & Anand (2008)[4]reported that Lung cancer frequently causes neurological complications from direct and indirect effects and brain metastatic tumours may be associated with a greater incidence of mental problems than primary tumours and may be probably due to tumours being scattered throughout brain substance. Similar findings is also been reported by **Michael L. Pearl et al**[5] (1998) who demonstrated that majority of the patients with brain metastases may present with neurological symptoms but a minority may develop psychiatric symptoms.

The clinical manifestations of intracranial lesions are generally dictated by the location of the metastases. Increased intracranial pressure and mental changes are symptomatic of a frontal metastatic lesion, visual field defects and cortical blindness are indicative of an

occipital metastasis, motor weakness suggests a front parietal lesion, and a cerebellar metastasis may manifest itself as ataxia or symptoms related to hydrocephalus.

Madhosoodanan et al. (2006)[6] also reported psychiatric symptoms as a initial presentation in case of brain tumour and similar findings are also reported by other authors. In our case, the patient initially presented with depressive symptoms like sad feeling, sleep disturbances, hopelessness, suicidal ideation precipitated by a stressor and since patient did not have any abnormality in either positive and deficits in neurological examination, we thought this a case of clear cut depression without any organic origin.

Manic symptoms in a case of small cell carcinoma of the lung with ectopic adrenocorticotropic hormone (ACTH) production have been reported [8] but few others are found only neurological symptoms in a case of brain metastasis in case of lung carcinoma.[9]

Neuropsychiatric symptoms like cognitive impairment, impaired memory for recent events, nominal aphasia may be present in case of cerebral tumours and clinical neurological examinations sometimes generally unremarkable with no evidence of focal signs or features of raised intracranial pressure. The factors contributing to the psychiatric symptomatology of cerebral tumours are raised intracranial pressure, location of the tumour, nature of the tumour and the individual constitution and response of the patient.[10]

This case demonstrates that intracranial metastasis can manifest as late onset depression without significant accompanying neurologic deficits. Therefore, clinician should conduct extensive investigations for each and every patient who presents with such symptoms especially in old age. It is also suggested that thorough and systematic physical, mental status examination is necessary in every patient with late onset of mental problems to prevent lapse in diagnosis and delayed treatment which has potentially serious consequences. Appropriate intervention may improve the patient's prognosis and quality of life, hence early and accurate diagnosis is crucial.

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