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# A Rare Case Of Acute CVA Unveiled

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**Abstract**

We report an extremely rare case of Hemorrhagic brain metastasis prior to the discovery of the primary lesion in a 72 year old male presented with left sided hemiparesis with UMN facial palsy. The morbidity of Brain metastasis is higher in patients with lung carcinoma than that of melanoma, breast cancer, renal cell carcinoma, and colorectal cancer.[1] The most common clinical symptoms of Brain Metastasis upon initial diagnosis was a headache (25.2%), followed by motor dysfunction (20.5%), dizziness (5.8%), and seizure (3.5%). Cerebral lesions were asymptomatic at the time of the initial diagnosis of BM (50.8%).[2] Since these symptoms are easily confused with ICH, the diagnosis of BM can be missed. This rare presentation of tumor may present as a diagnostic challenge to, as it has propensity to present as hemorrhagic brain metastasis with unknown primary and result in delay in diagnosis that could impact clinical outcome.

**Keywords**: Hemorrhagic brain metastasis, Lung cancer

## Introduction

72 year old male, chronic smoker – 20 packyears, with no other known comorbidities, presented to ER with sudden onset of left sided upper and lower limb weakness for one day with deviation of angle of mouth towards right side. On clinical examination patient had raised blood pressure of 170/90mmhg, CNS examination showed GCS-15/15, left UMN facial palsy with left side hemiparesis. Routine biochemical investigations were within normal limits. CT brain showed area of hyperdensity in the pons suggestive of pontine hemorrhage. Patient was treated with antiedema measures and other supportive measures. Follow up MRI brain showed multiple T2/FLAIR high signal intensity lesions with adjacent edema noted at grey white junction of bilateral fronto-parietal lobes, left occipital lobe and left cerebellar hemisphere - suspicious of metastasis. Patient had history of persistent cough with expectoration along with occasional hemoptysis. Respiratory system examination was normal. Chest Xray showed homogenous opacity over the right lower zone with widened mediastinum. CECT Thorax showed right homogenous enhancement of hilar mass with pulmonary artery invasion causing infarct in the posterior segment of right upper lobe, suggestive of Bronchogenic carcinoma. Because of the presence of multiple bilateral hemorrhages in the brain and nodules in the right lung, we considered hemorrhage to be caused by Brain Metastasis from the lung rather than hypertension.

**Fig 1(Left) : Area of Hyperdensity in the pons suggestive of pontine hemorrhage.**

**CT BRAIN**

**Fig 2 A(Right) : Multiple T2/FLAIR high signal intensity lesions with adjacent edema noted at grey white junction of bilateral fronto-parietal lobes**

**MRI BRAIN T2/FLAIR-FRONTAL LOBE**

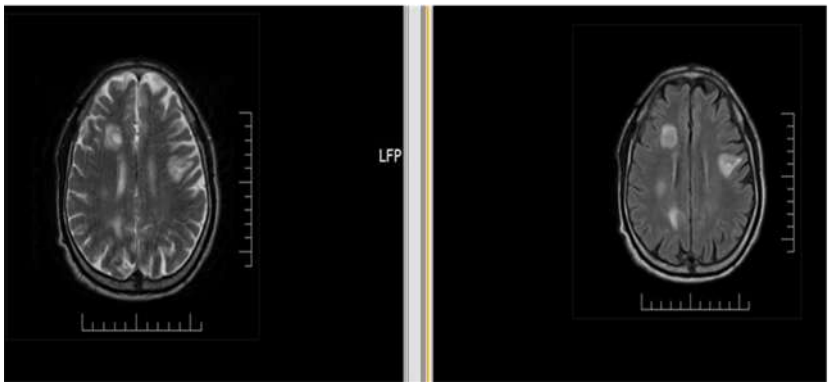


**Fig 2 B (Left) : Hypointense lesion with significant blooming in pons with adjacent edema extending to midbrain**

**BLOOMING-PONS**

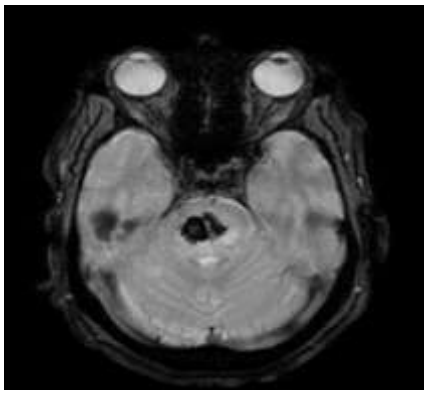



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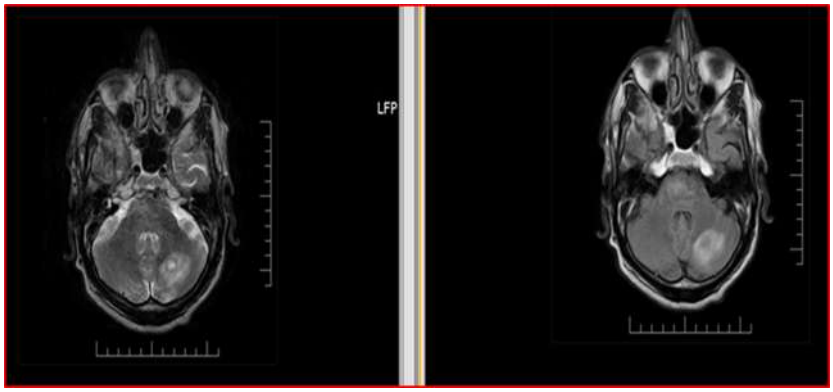
**Fig 2 C (Right) : T2/FLAIR high signal intensity lesions with adjacent edema noted at grey white junction of Left occipital lobe and left cerebellar hemisphere**

**MRI BRAIN T2/FLAIR-CEREBELLUM**




There was no involvement of Sensory system, autonomic system or cerebellar system clinically. Bowel and bladder habit was intact. Other Systemic examination was unremarkable. Routine blood investigations – complete blood count, renal function test, Liver function test, electrolytes, thyroid function test, urine routine, diabetic profile were all normal.

Patient had history of persistent cough with expectoration along with occasional hemoptysis. CT Thorax was done for the patient and it revealed Right homogenous enhancement of hilar mass with pulmonary artery invasion causing infarct in the posterior segment of right upper lobe, suggestive of Bronchogenic carcinoma. Patient was planned for bronchoscopy and lung biopsy was taken and BAL sample sent for further workup. Patient was started on anti-edema measures (osmotic diuretics), anti-epileptics and symptoms improved clinically.

**Fig 3(Left): Right homogenous enhancement of hilar mass with pulmonary artery invasion**



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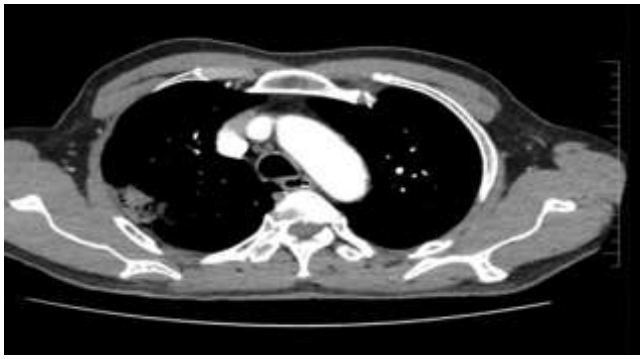
**Fig 4(Right): Infarct in the posterior segment of right upper lobe**



**Discussion:**

Intracerebral haemorrhage(ICH) is any type of bleeding that occurs in the brain tissue. The most common cause of ICH is Hypertension (70%), Other causes includes : Amyloid angiopathy (15%), Arteriovenous malformations, Aneurysm rupture, Coagulopathy, Tumors, Infection, Vasculitis, Hemorrhagic transformation of ischemic stroke and trauma.[3] Hemorrhage associated with brain metastasis (BM) is a uncommon cause of ICH. Hemorrhagic intracerebral metastases are considered to present between 3-14% of all cerebral metastasis (1-3% of glioma are hemorrhagic).

The most common reasons for hemorrhagic intracranial metastasis includes,

1. Melanoma
2. Choriocarcinoma
3. Renal cell carcinoma
4. Bronchogenic carcinoma
5. Thyroid carcinoma
6. Breast carcinoma

The morbidity of Brain Metastasis is higher in patients with lung carcinoma than that of other malignancies. Brain metastasis is found in 10% to 25% of lung cancer patients upon initial diagnosis where 40% to 50% of lung cancer metastasized to the brain during the course of disease.[4] Most common clinical symptoms of BM upon initial diagnosis was a Headache (25.2%) followed by motor dysfunction (20.5%), dizziness (5.8%) and seizure (3.5%). The median survival time for untreated BM patients is 1 to 2 months, which may be extended to 6 months with radiotherapy and chemotherapy.[5] Coagulopathy or other hematologic disorders should be excluded in patients with malignancy if intracranial haemorrhage is documented. Treatment modalities include Mannitol was administered to reduce intracranial edema and pressure, whole brain radiation therapy(WBRT), Chemotherapy, Surgical resection of large lesions.

**Conclusion:**

The present case emphasizes the need to consider hemorrhagic metastasis as differential diagnosis in patients presenting with intracerebral haemorrhage and also early diagnosis and active treatment are vital to improve prognosis and survival.

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