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ACP Michigan Chapter Meeting 2022 - Medical Student Day

Medical Student Poster #6

Category: Clinical Vignette

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Pituitary Metastasis of Non-Small Cell Lung Cancer

Lung cancer is the most commonly diagnosed cancer worldwide. Metastasis to other organs is also common. Of these, approximately 25% involve metastasis to the brain. In the brain, however, it is known that only 1% of brain metastasis involve the pituitary gland. In this report, we present a 70-year-old woman that was diagnosed with Non-Small Cell Lung Cancer (NSCLC) a year ago presenting with metastasis to the pituitary.

A 70-year-old woman with past medical history of longstanding tobacco abuse, COPD, hypertension, and lung cancer (NSCLC stage IB in the upper right lobe diagnosed 1 year ago) presented to the emergency department with intractable nausea, vomiting, and headache. She described inability to keep food down, weakness, and mild abdominal pain. She denied chest pain, shortness of breath, and current visual disturbances. Neurologic physical exam revealed no focal neurological deficit, no visual field defect, and normal coordination.

Patient had been previously scheduled to receive a pituitary biopsy for this mass that was found on PET scan approximately 1 month prior. MRI of brain revealed a 1.8cm enhancing lesion in the sella turcica affecting the clivus with extension into the pituitary stalk but no cavernous sinus invasion. A transsphenoidal biopsy and subtotal resection yielded metastatic adenocarcinoma of lung primary.

Her perioperative course was complicated by preoperative adrenal insufficiency and postoperative diabetes insipidus, managed by endocrinology. She continued to have persistent headache and nausea, and therefore there was suspicion for leptomeningeal carcinomatosis. MRI spine showed subtle scattered nodular enhancement along the surface of the spinal cord and cauda equina. LP was obtained with results positive for malignant cells.

Subsequently, the patient had immediate placement of Ommaya reservoir and received their first dose of intra-thecal chemotherapy while in the hospital, with plans for both further intra-thecal chemotherapy, systemic chemotherapy and palliative RT to start soon after hospital discharge. This case shows the unique occurrence of lung cancer metastasis to the pituitary region following a stage IB lung cancer diagnosis highlighting the importance of follow up imaging and investigations for metastasis post diagnosis even in the absence of initial metastatic foci.