Lung Cancer Metastasis to the Pituitary Gland

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Introduction: Common sites of lung cancer metastasis include the bone, brain, liver, and adrenal gland. Cancer metastasis to the pituitary gland or sellar region is a rare finding. Here, we present a case of pituitary gland metastasis from underlying lung cancer in a patient presenting with a predominance of pituitary symptoms.

Case Report: A 48-year-old white female with a 36 pack-year smoking history presented to the hospital with chief complaints of worsening fatigue, intractable headaches, and blurred vision over the past three months. Associated symptoms included daily nausea, progressive anorexia with 25-lb weight loss, lightheadedness, exertional shortness of breath, cold intolerance, hair loss, dry skin, polyuria, polydipsia, abdominal pain, and diarrhea. She smoked one pack of cigarettes daily since the age of 12, and she did not drink alcohol. Mother died of lung cancer at age 58. A brain MRI done two months earlier revealed a large mass in the pituitary gland and sella turcica area. Biochemical test abnormalities consistent with pituitary hormonal insufficiencies were noted, and subsequent imaging showed an enlarging pituitary mass and extensive metastases to the bones, brain, liver, adrenal gland, and lymph nodes. CT Scan of the lungs with contrast showed a macrolobulated mass 2.5 x 2.4 x 2.3cm in the left upper lung. Bone biopsy was consistent with poorly differentiated adenocarcinoma of the lung as the primary site.

Conclusion: Cancer metastasis to the pituitary gland is rare. Worsening pituitary symptoms with an enlarging pituitary mass and widespread metastases should alert consideration for pituitary metastasis and a search for a primary cancer site.

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