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A Comprehensive Overview of Rare Initial Presentation of SIADH in Small Cell Lung Cancer

[1]Dr. Mohamed Ayub Sulaiman.H; [2.] Dr. Nagarajan.K
Shri Satyha Sai Medical College and Research Institute

Abstract:- SIADH a condition where anti-diuretic hormone (ADH) is secreted in the absence of appropriate physiological stimuli. SIADH mostly characterized by hypotonic, euvolemic hyponatremia with urinary hyperosmolarity. SIADH is a well-known paraneoplastic syndrome frequently linked with small-cell lung cancer (SCLC).

I. INTRODUCTION

SIADH a condition where anti-diuretic hormone (ADH) is secreted in the absence of appropriate physiological stimuli. SIADH mostly characterized by hypotonic, euvolemic hyponatremia with urinary hyperosmolarity. SIADH is a well-known paraneoplastic syndrome frequently linked with small-cell lung cancer (SCLC).

Small cell lung cancer (SCLC) represents approximately 15-20% of total lung cancer cases and is known for its highly aggressive nature. It is notorious for its fast growth, tendency to spread quickly, and high chances of relapse. Most patients, around 60-70%, are diagnosed when the disease has already spread extensively.[1] Catching it early can significantly improve the chances of a better outcome.

SIADH typically occurs most often during chemotherapy or in advanced disease stages. Occasionally, SIADH is also reported at the initial diagnosis of SCLC, though less commonly. However, SIADH presenting before the detection of SCLC is exceptionally rare. We here in report such a case.[2]

II. CASE REPORT

A case report of 60 year old male patient, admitted under General medicine department presented with complaints of giddiness for 1 week & loss of appetite for 1 month. The patient had no known co-morbidities. Patient is a known smoker – 35 pack years.

On examination vitals were within normal limits. Laboratory investigations showed hyponatremia Na^{2+} -112 meq/l, potassium K^{+}– 3.9 meq/l, RBS – 120 mg/dl, Renal function, liver function and thyroid function tests are normal. Urine osmolality - 351 mOsm/kg, Urine Sodium - 49.6 mmol/L & serum osmolality - 236 mOsm/kg.

III. DIAGNOSTIC ASSESSMENT

After discovering low serum osmolality, high urine osmolality, elevated urine sodium levels, and clinical euvolemia, and ruling out renal, pituitary, adrenal, and thyroid disorders, the diagnosis of inappropriate ADH syndrome was made. Treatment involved fluid restriction and administration of 3% NaCl. Though the patient had no complain of any of the pulmonary symptoms, A thoracic computed tomography (CT) scan was conducted to explore the underlying cause of SIADH. HRCT Chest revealed Multiple conglomerates heterogeneously enhancing nodular dense soft tissue mass lesions in the subcarinal region, posterior mediastinum along the right paraesophageal location and right hilar region -likely nodal mass lesions & a well-defined enhancing soft tissue attenuation peripheral nodule involving superior segment of right lower lobe – suggestive of neoplastic aetiology. A biopsy guided by CT scan of a nodule in the lower lobe of the right lung confirmed the histopathological diagnosis of small-cell lung cancer.

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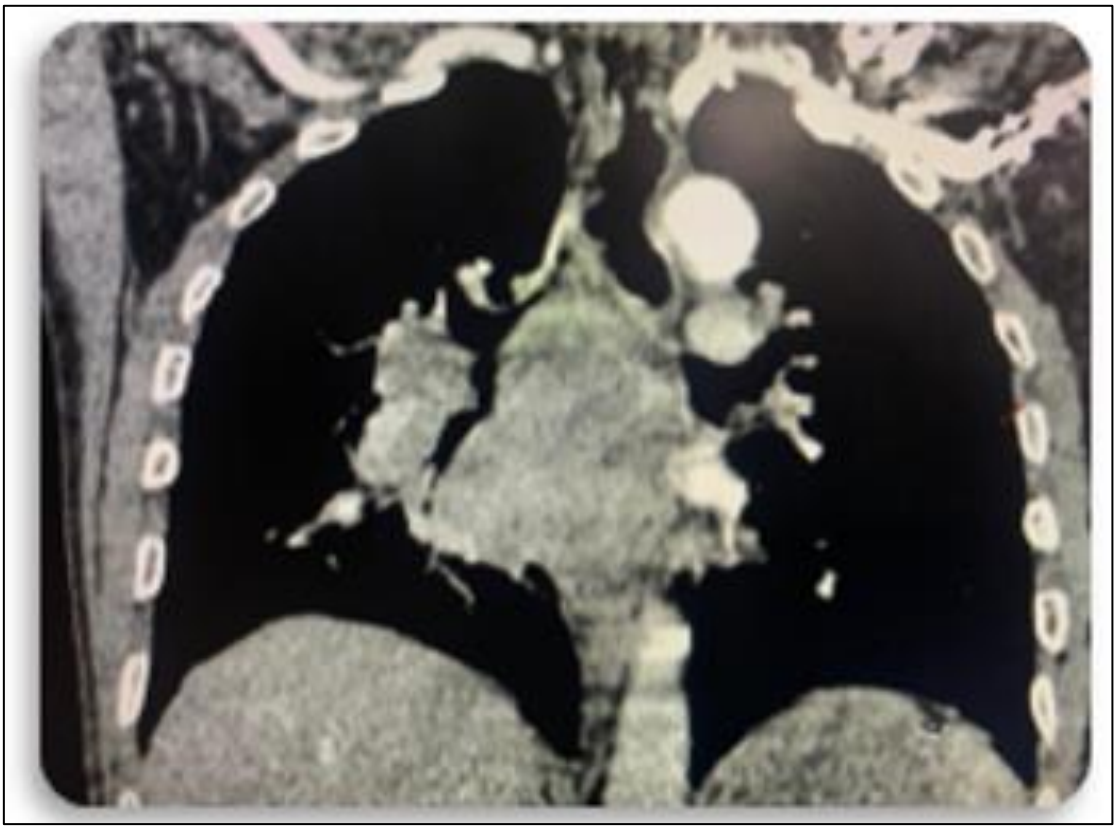

Fig 1 CT Thorax Nodal Mass Lesions near Hilar Region

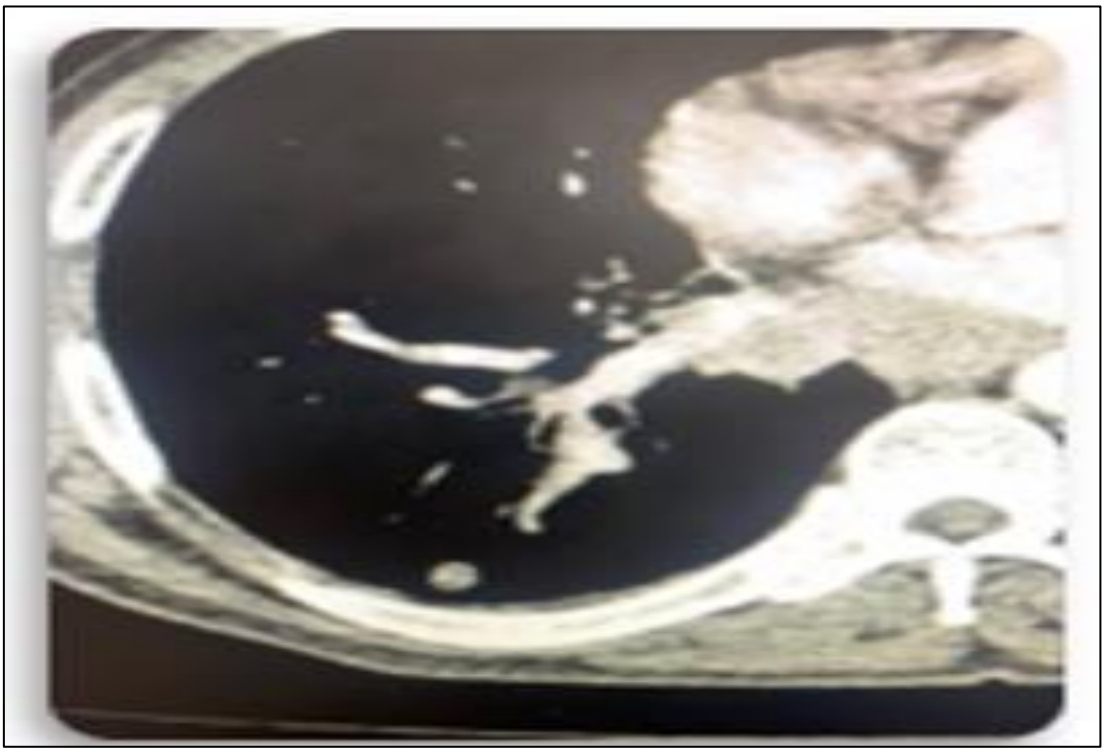

Fig 2 : Enhancing Peripheral Nodule

IV. DISCUSSION

Detecting the underlying paraneoplastic syndromes could be pivotal in diagnosing SCLC in a patient who appears otherwise asymptomatic [2]. According to a study by Leena Gandhi et al., ectopic hormone production is linked with advanced stage disease [3]. List AF et al had reported from their study that 33 out of 40 patients had SIADH in the initial presentation.[4]

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V. CONCLUSION

SIADH rarely manifests as the initial presentation before detecting SCLC. However, thorough evaluation of SIADH and clinical suspicion can lead to early detection of small cell lung carcinoma.

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