

**Abstract:**

Antidiuretic hormone (ADH), Arginine vasopressin (AVP) is essential in sodium and water balance of the body. Deficiency of ADH will cause Central Diabetes insipidus (CDI) while excess will cause Syndrome of inappropriate ADH (SIADH). Herein, we present a case of a 56-year-old male who presented with polyuria, nocturia and polydipsia. Initial endocrine profile confirmed a CDI, which was then evaluated with an MRI brain followed by a biopsy from a suspicious pituitary enhancement. The biopsy was negative for infiltrative causes and atypical cells. Physical examination and the initial assessment for a secondary cause did not reveal any abnormality. He was started on ADH, thyroxine and steroid replacement. Later he presented with difficult-to-treat hyponatremias even after withholding the ADH replacement therapy. The diagnosis of the co-existence of posterior pituitary metastasis causing CDI and ADH secretion from tumour causing SIADH was made. Contrast CT chest and CT guided biopsy revealed a primary lung adenocarcinoma. Conclusion and significance: Primary lung adenocarcinomas should be taken into consideration in adults presenting with CDI. There can be dilemmas in treating hyponatremias due to coexisting SIADH. We suggest having better-designed case studies and research to understand the molecular and chemical pathology in primary lung adenocarcinomas in future.