Psychosis followed by Lung Cancer with Syndrome of Inappropriate Secretion of Antidiuretic Hormone (SIADH): A Case Report

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Abstract
Syndrome of inappropriate secretion of antidiuretic hormone (SIADH) refers to the excessive release of antidiuretic hormone (ADH) resulting in water retention, dilutional hyponatremia and urinary sodium waste, and some other clinical manifestations. Causes of SIADH include many disease conditions, some medications and nicotine. The present study reports a case of psychosis followed by lung cancer with syndrome of inappropriate secretion of antidiuretic hormone, which indicates the importance of precaution of lung cancer in psychotic patients presenting with SIADH.

Keywords
SIADH, Psychosis, Lung cancer

Introduction
SIADH refers to the endogenous antidiuretic hormone (ADH) secretion increases abnormally (even in low humoral permeability or effective blood volume expansion), thereby cause water retention, dilutional hyponatremia and urinary sodium waste, and other clinical manifestations.

The first case of SIADH was reported in lung cancer patients by Schwartz [1] in 1957, so it is also known as Schwartz-Bartter syndrome. During the latter half of the 20th century, these unusual impairments in water excretion and intake were recognized as common causes of morbidity and a frequent cause of death in schizophrenic patients. More recent studies suggested that these patients could be easily distinguished from patients whose hyponatremia is attributable to recognized causes [2] such as tumor, inflammation, trauma, and so on.

Here we report a case of psychosis followed by lung cancer with syndrome of inappropriate secretion of antidiuretic hormone.

Case Report
“Mr. X,” a 51-year-old worker, married, was admitted to hospital with cough, chest distress, and insomnia for more than two months. He was worried about lung cancer. Half a month ago, he suddenly felt unsafe. He believed that people around him wanted to
Discussion

Psychosis is thought to be able to reduce the osmotic set point for AVP secretion, which may be due to a stress diathesis associated with the underlying psychiatric illness. Acute psychosis is associated with impairments in water and electrolyte balance. This was termed the syndrome of psychosis, intermittent hyponatremia, and polydipsia in patients with schizophrenia [3].

SIADH also associated with some medications, particularly diuretics or psychotropics such as anticonvulsant mood stabilizers, serotonin reuptake inhibitors, tricyclic antidepressants and antipsychotic medications. Both the newer atypical antipsychotics and the first generation antipsychotic drugs have been associated with the development of hyponatremia [4]. Life-threatening hyponatremia in psychotic patients is common and typically is attributable to either antipsychotic medication or to acute psychosis. The preferred treatment for one situation may worsen the hyponatremia if the other medical situations are companied. In a systematic review of fifty-four cases of hyponatremia without recognized causes in psychotic patients, the findings indicate that measures of urine concentration can help distinguish between antipsychotic-induced and psychosis-induced hyponatremia [5].

Nicotine will impair water balance. This is apt to contribute to hyponatremia because so many schizophrenic patients smoke heavily.

Conclusion

In this case the symptoms of the patient with psychiatric symptoms as the first manifestation, the examination showed hyponatremia, and then it was diagnosed as SIADH, finally diagnosis for lung cancer. Either antipsychotic medication or acute psychosis will both cause SIADH, a variety of reasons leading to the mechanism of SIADH need to be further clarified.

Disclosure

The authors report no conflicts of interest in this work.

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References


