

## Salicornia Herbacea섭취로 인한 갑상선기능항진증과 관련된 저칼륨혈증 마비 1예

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### Thyrotoxic Hypokalemic Paralysis Associated with Ingestion of Salicornia Herbacea

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Salicornia herbacea is a halophyte that grows in salt marshes, or salt fields, along the seashore of South Korea. It contains many minerals, calcium, potassium, fibers and iodine. This is used as alternative medicine for prevention of diabetes mellitus, improvement of constipation and blood circulation in South Korea. Thyrotoxic hypokalemic paralysis is defined as hypothyroidism-related hypokalemia and acute muscle weakness resulting from an abrupt transcellular potassium shift. We describe a 56-year-old patient who developed flaccid paralysis in lower extremities resulting from severe thyrotoxic hypokalemia induced by intake of Salicornia herbacea. He had no family or personal history of periodic paralysis. His initial vital signs in emergency room were within normal limit. He could not walk and lift his legs on bed. There was no evidence of secondary hypertension. His initial potassium and magnesium level was 1.8 and 2.1 mmol/L respectively. Arterial blood gas analysis revealed that pH was 7.42,  $PCO_2$  42 mmHg and  $HCO_3^-$  25 mmol/L. Through history revealed that he has been taking Salicornia herbacea for the treatment of diabetes and hypertension. Thyroid function test showed as follows: T3 130.40 ng/dL (80-200 ng/dL), TSH 0.06 mIU/L (0.27-4.2 mIU/L), and free T4 1.73 ng/dL (0.93-1.70 ng/dL). Thyroid scan showed diffuse enlargement with decreased uptake (0.6%). With intravenous replacement of 40 mEq of potassium during first 12 hours, his symptoms were clearly improved and serum potassium level increased to 4.4 mmol/L. Eight months after withdrawal of only Salicornia herbacea, thyroid function tests were normalized: T3 120.60 ng/dL (80-200 ng/dL), TSH 1.90 mIU/L (0.27-4.2 mIU/L), fT4 1.28 ng/dL (0.93-1.70ng/dL). In conclusion, we should keep in mind that large amount of iodine can induce thyrotoxic hypokalemia paralysis and check whether patients ingest iatrogenic iodine when we confront patients with unknown etiology of hypokalemia and paralysis.

**Key Words:** 갑상선기능항진증, 저칼륨혈증, 마비  
Hyperthyroidism, Hypokalemia, Paralysis