中文題目:一位精神病患身上依序出現了低血鉀、高血鈉、低血納，及多尿

英文題目: A psychogenic patient present with hypokalemia , hypernatremia, hyponatremia and even polyuria

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Persistent severe hypokalemia can impair urinary concentrating ability. As with hypercalcemia , both decreased collecting tubule responsiveness to ADH, which may be mediated by decreased expression of aquaporin-2. We report a 44-year-old man with schizophrenia afflicted with herbal medicine induced hypokalemia and complicated with nephrogenic diabetes insipidus.

A 44-year-old man has the history of schizophrenia controlled with clozapine and depakine at 松德 hospital. He present to emergency department with progressive muscle weakness for ten more days. No other medical problem was found except hypokalemia (K: 1.5 Meq/L) with renal potassium (K^+) wasting (transtubular K^+ gradient, TTKG 6) . He denied diuretic used history and normomagnesemia(2.1 mg/dl) was found. Other associated Laboratory investigation showed metabolic alkalosis(HCO3:40 mmol/l), urine Cl : 51mEq/L, rennin: 0.41 ng/ml/hr , aldosterone: 42.4 pg/ml. But he took herbal medicine due to nocturuea for 1 month . After survey , licorice in the herbal medicine was found.

After admission, he received intubation due to progressive weakness and hypercapnic respiratory failure related to hypokalemia. 3 days after admission , he present with polyuria and hypernatremia . Urine osmolarity revealed 276 mOsm/L at that time. So diabetes insipidus was suspected. Then, we used DDAVP for polyuria but the effect was limit. Thus, nephrogenic diabetes mellitus was suspected.

After correcting hypokalemia and extubation , this patient still suffered from polyuria. But hyponatremia was found a few days later. Thus, we arranged water deprivation test for this patient .The test stopped 7 hours later before DDAVP used due to less urine output(30,15 ml at 6^{th} 7^{th} hour respectively). For possible primary polydipsia, we re-evaluated his habit of intake and we found that he used to overdrank himself. After correcting primary polydipsia , no more electrolyte imbalance was found and this patient discharge in stable condition.