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A Case of Gitelman's Syndrome Dependent On Spironolactone for Recovery.

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Background: Patients with Gitelman's syndrome present a variety of metabolic abnormalities, such as hypokalemia, hypomagnesemia, hypocalciuria and metabolic alkalosis. Treatment of patients with Gitelman syndromes usually combines lifelong administration of a drug that blocks distal tubule sodium-potassium exchange and supplementation with potassium chloride and magnesium. In this case, Hypokalemia and metabolic alkalosis, whitch didn't improved by potassium chloride and magnesium hydroxide administration, improved after spironolactone administration. The mechanism of variability of medical effect remains unproven, and further study is needed.

Methods: .

Results: A 44-year-old woman visted outpatient clinic with severe fatigue and general weakness. Her blood pressure was 90/70 mmHg, pulse rate was 78 beats per minute, body temperature was 36.1C and had no signs of dehydration. The laboratory data was as follows: pH7.46, PaCO2 54mmHg, PaO2 17mmHg, bicarbonate 40mEq/L, base excess 12.8mEq/L. Serum Na 140 mg/dL, K 3.1mg/dL, chloride 92mg/dL. Magnesium 1.8 mg/dL,calcium 8.5 mg/dL, Renin activity 24.48 ng/mL/hr, aldosterone 83.3 ng/dL, TTKG 8.82. Urine chloride was 70mEq/L, Spot urine Ca/Cr ratio was 5.12 mg/g. Hypomagnesemia, Hypocalciuria favored a diagnosis of gitelman's syndrome. Mgnesium hydroxide 1500mg/day and Potassium chloride 48 mEq/day was administrated for 2 weeks. Follow up laboratory data did'nt improved as follows: pH7.51,PaCO2 58mmHg, PaO2 34mmHg, bicarbonate 46mEq/L, base excess 19.8mEq/L. Serum K 2.4 mg/dL, chloride 81mg/dL. Magnesium 2.2 mg/dL, TTKG 18.

Herein, spironolactone 25mg/day was added for 1 week, and 2nd follow up laboratory data improved dramatically as follows: pH7.36,PaCO2 48.5mmHg, PaO2 19mmHg, bicarbonate 28.5mEq/L, base excess 1.2mEq/L. Serum K 5.5 mg/dL, Magnesium 2.2 mg/dL.

Conclusion: .

Keywords: Gitelman, hypokalemia, metabolic alkalosis