

메포르민 사용 환자에서 시메티딘 복용 후 발생한 유산산증과 급성 췌장염

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Lactic Acidosis and Acute Pancreatitis Associated with Cimetidine in a Patient with Type 2 Diabetes Mellitus Taking Metformin

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Background: Metformin is commonly used to treat type 2 diabetes mellitus. Lactic acidosis is a very rare complication of metformin use. The risk of lactic acidosis increases with age and degree of kidney impairment. Cimetidine used in the treatment of peptic ulcers, and reflux esophagitis has also been reported to induce acute pancreatitis. Acute kidney injury (AKI) often occurs in patients with acute pancreatitis due to decreased circulating blood volume. We describe here a rare case of a patient with metformin-induced lactic acidosis with AKI associated with cimetidine induced acute pancreatitis who recovered with supportive treatment and continuous veno-venous hemodiafiltration (CVVHDF).

Case: An 82-year-old woman with type 2 diabetes mellitus, hypertension, and unstable angina presented to the emergency department with confusion. Her medical history revealed that she had added cimetidine during 2 weeks of taking other medications, including metformin. In the emergency room, the patient's blood pressure was 80/50 mmHg, pulse rate 52/min, and body temperature 36.1°C. Her respiration was very deep and respiratory rate was 28/min. The patient's laboratory findings were as follow: white blood cell count 23,900/ μ L, hemoglobin 13.8 g/dL, platelet count 306,000/ μ L. Biochemistry showed blood urea nitrogen 93.3 mg/dL, creatinine 5.1 mg/dL, AST/ALT 80/25 IU/L, total protein 6.4 g/dL, albumin 4.1 g/dL, Na/K/Cl/tCO₂ 136/6.5/90/1 mEq/L, calcium 10.2 mg/dL, phosphorus 15.8 mg/dL, amylase/lipase 297/892 U/L. Arterial blood gases showed a pH of 6.950, a HCO₃⁻ of 3.9 mmol/L, and an anion gap of 42.1 mmol/L. Serum lactate level was 12 mmol/L and ketone was negative. CVVHDF was started under the impression of severe lactic acidosis due to metformin and AKI accompanied by cimetidine induced acute pancreatitis. With 3 days of CVVHDF, the serum biochemical markers of lactic acidosis and AKI had improved and the patient's urine output reached over 1 L/day. The markers were not aggravated by stopping CVVHDF and the patient's pancreatitis improved with time.

Key Words: 유산산증, 급성 췌장염, 혈액투석

Lactic acidosis, Acute pancreatitis, Hemodialysis