

## 메포르민 사용에 의한 유산산증 치료 경험 2례

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### The Experiences of Management of Two Cases of Metformin-associated Lactic Acidosis

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**Introduction:** Metformin-associated lactic acidosis is a rare, but life-threatening complication that has a mortality of about 30 to 50%. Here, we report two cases of metformin-associated lactic acidosis.

**Case 1:** A 71-year-old Korean woman with type 2 diabetes mellitus presented to the emergency department for the evaluation of nausea and vomiting. On admission, her blood pressure was 90/60 mmHg measured in supine position, heart rate 75 beats/min, and respiratory rate 20/min. Her medications included metformin of 2000 mg per day. The results of blood analysis are as follows: pH 6.86; pCO<sub>2</sub> 11 mmHg; pO<sub>2</sub> 112 mmHg; actual bicarbonate 3.0 mmol/L; base excess -25 mmol/L; and lactate 21.9 mmol/L. The blood urea nitrogen and serum creatinine concentrations were 79 mg/dL and 8.4 mg/dL, respectively. She was admitted to the intensive care unit and treated with continuous veno-venous hemodialofiltration (CVVHDF) and intravenous vasopressors. Following CVVHDF for 48 hours, the acid-base status of the patient returned to normal range. She was discharged with improved renal function (Cr: 0.8 mg/dL) after four weeks.

**Case 2:** A 71-year-old woman with type 2 diabetes mellitus presented to the emergency department for the evaluation of mental deterioration. On admission, her blood pressure was 80/50 mmHg measured in supine position, heart rate 96 beats/min, and respiratory rate 23/min. Her medications included metformin of 2000 mg per day. The results of arterial blood gas analysis are as follows: pH 6.86; pCO<sub>2</sub> 16 mmHg; pO<sub>2</sub> 120 mmHg; actual bicarbonate 1.0 mmol/L; and lactate 25.1 mmol/L. The blood urea nitrogen and serum creatinine concentrations were 89 mg/dL and 6.0 mg/dL, respectively. CVVHDF was initiated immediately, and then the patient improved with normal range of acid-base status. However, pneumonia and catheter infection developed at the 5th day of admission. And then the patient expired because of septic shock.

**Conclusion:** We report two cases of metformin associated lactic acidosis. One patient improved following rapid CVVHDF and appropriate supportive care, whereas the other expired because of septic shock even if her acid-base status was normalized. Thus, the rapid clearance of the lactate with renal replacement therapy and appropriate supportive care is very important in the management of metformin associated lactic acidosis.

**Key Words:** 메포르민, 유산산증  
Metformin, Lactic acidosis