

## ■ S-425 ■

## The experiences of management of two cases of metformin-associated lactic acidosis

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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 DM presented to the emergency department for the evaluation of nausea and vomiting. On admission, her blood pressure was 90/60 mmHg measured, 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 BUN and serum Cr concentrations were 79 mg/dL and 8.4 mg/dL, respectively. She was admitted to the ICU 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, 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 BUN and serum Cr 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.

## ■ S-426 ■

## A case of bilateral renal artery stenosis presenting as Flash pulmonary edema

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Flash pulmonary edema is a term used to describe sudden and recurrent episodes of dyspnea at rest resulting from acute pulmonary venous congestion in the presence of normal or well-preserved left ventricle systolic function. This is often present with bilateral renal artery stenosis or unilateral stenosis of a single kidney. We describe here a case of a 65-year-old man with bilateral renal artery stenosis presenting as flash pulmonary edema. He was diagnosed hypertension, left renal artery stenosis with atrophied left kidney and arteriosclerosis obliterans 10 years ago. He presented to our department with recurrent episodes of dyspnea, pitting edema, and pulmonary congestion of chest x-ray. Serum creatinine level was increased to 4.65 mg/dL. Magnetic resonance angiography of kidney showed bilateral renal artery stenosis with atrophied left kidney. Diethylenetriamine pentaacetat (DTPA) scan showed well functioning of right kidney. He was treated with stenting of right renal artery. After that time serum creatinine decreased to 2.22 mg/dL and the improvement of patient's symptoms such as dyspnea and pitting edema was observed.