

中文題目：嚴重高氯代謝性酸血症之個案報告

英文題目：A Case of Severe Hyperchloremic Metabolic Acidosis

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INTRODUCTION

Although the cause of metabolic acidosis is usually identified via history taking and basic laboratory workup, it is sometimes difficultly detected at the initial stage. Herein, we present a case of severe metabolic acidosis from a cause which was not easily identified initially.

CASE REPORT

A 80-year-old madam with a history of major depressive disorder was taken to the emergency department (ED) of a local hospital soon after being found comatose with vomitus in her mouth by her family. She presented to the ED with stupor consciousness. Laboratory examination revealed leukocytosis, severe acute metabolic and respiratory acidosis, and normal serum potassium level. The patient was soon intubated and received left tubal thoracostomy for the left pneumothorax; fluid resuscitation, vasopressor support, and antibiotic treatment were initiated. Follow-up lab tests showed resolution of respiratory acidosis and progression of metabolic acidosis with slightly elevated lactate level. Due to progression of metabolic acidosis on the next day despite of fluid resuscitation, she was transferred to our hospital for continuous renal replacement therapy.

She presented to our hospital with fever and diffuse abdominal tenderness with muscle guarding. Laboratory examination revealed hypoalbuminemia, elevated pro-calcitonin level, acute kidney injury, hyperlactemia, and severe hyperchloremic metabolic acidosis. Abdominal computed tomography revealed stomach perforation with the tip of nasogastric tube in the pneumoperitoneum. On emergent exploratory laparotomy, diffuse necrosis of the gastric wall with multiple perforations was found. The family declined the suggestion of esophago-gastrectomy with reconstruction and asked for palliative care.

Because her severe acute hyperchloremic metabolic acidosis could not be adequately explained with lactic acidosis from shock, accompanying with the surgical findings, we speculated that the patient ingested hydrogen chloride. After repeated inquiries, the family finally admitted that she was found with an empty bottle of hydrochloric acid besides her. Two days later, the patient died after life-support withdrawal.

DISCUSSION

Metabolic acidosis is usually classified into high anion gap metabolic acidosis and normal anion gap metabolic acidosis. In this patient, the clinical course of rapid and fulminant acidosis and normal serum potassium level decreased the possibility of renal tubular acidosis and gastrointestinal loss of bicarbonate. Severe acute hyperchloremic metabolic acidosis might results from massive saline resuscitation or ingestion of certain compounds. Accompanying with the intraoperative findings of corrosive injury of the stomach, the major etiology of metabolic acidosis is identified.

In conclusion, we presented a case of severe acute hyperchloremic metabolic acidosis related to ingestion of hydrogen chloride. Our case highlight the need of careful observation and analysis of clinical signs and laboratory findings, because the family might not tell the whole story to the physicians.