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Introduction:
We present a case report of ‘Shoshin beriberi’ in a young female who was ‘fussy with food’ that developed an acutely progressive metabolic acidosis and multi-organ failure requiring intensive care support.

Methods:
Our patient was a 36-year-old British woman who presented to the emergency department (ED) with a ten-day history of diarrhea, vomiting and increasing fatigue. She had a past medical history of gastroparesis, polycystic ovary syndrome (on metformin), laparoscopic cholecystectomy and hysteropexy. She lived with her husband and two children who had viral gastroenteritis two weeks previously.

Results:
The patient had a metabolic acidosis (pH 6.9) with raised lactate (>16) on initial blood gas in the ED. A 1.26% sodium bicarbonate infusion and hemofiltration were commenced overnight. The patient’s pH and lactate remained static with an increasing work of breathing over this period. By morning she developed flash pulmonary oedema and hypotension, the first signs of acute cardiac failure. An echocardiogram displayed severely impaired left ventricular function with ejection fraction of 17%. The patient was intubated and inotropic support was commenced. It was thought that a micronutrient deficiency may have caused a rapid onset cardiac failure. Pabrinex (containing 250ml of Thiamine Hydrochloride) was commenced and within 9 hours the patient’s metabolic acidosis markedly improved (figure 1). Complete reversal of the cardiac failure occurred over 96 hours.

Conclusion:
Shoshin is a rare clinical manifestation of thiamine deficiency [1]. It is an important differential diagnosis to bear in mind after excluding more common aetiologies of heart failure. Especially in this case as our patient had no obvious risk factors at the time of presentation. We suggest empiric use of thiamine should be considered in treatment algorithms for young patients presenting with acute cardiac failure.

References:

Image 1:

Serum lactate and pH with thiamine administration