Metabolic Acidosis and Thiamine Deficiency

The study describes a 19-year-old patient who was receiving home parenteral nutrition, in whom lactic acidosis developed. A review of her home parenteral nutrition formula revealed the absence of multivitamins, most significantly thiamine. After thiamine administration, the acidosis resolved, and the patient experienced pronounced clinical improvement. Clinicians must be aware that thiamine is essential for normal glucose metabolism and that thiamine deficiency can lead to lactic acidosis. Thiamine should be included in the differential diagnosis of lactic acidosis. The recent shortage of intravenous multivitamin preparations has led to documented cases of lactic acidosis as a result of thiamine deficiency, and a previous shortage led several deaths due to lactic acidosis as a consequence of thiamine deficiency. All patients receiving parenteral nutrition must also receive adequate vitamin supplementation.