

## Alkali Therapy in Patients with Metabolic Acidosis

**To the Editor:** In his review "Acid-Base Disorders in ICU Patients, Oh<sup>1)</sup> writes in the summary on p 66 "The treatment target ... is not the acidosis, but the underlying condition causing acidosis". In contrast to this statement, Edge et al.<sup>2)</sup> have concluded that the immediate cause of coma in patients with acidosis is the very low blood pH. The glycolytic enzyme phosphofructokinase is pH dependent, as its activity is decreasing with decreasing pH, and, thus, glucose utilization in brain cells is impaired<sup>3)</sup>. For the readers of "Electrolyte Blood Press" it would be perhaps interesting to know, why the author did not comment the paper of Edge et al.<sup>2)</sup>.

On p 69, the author writes "HCO<sub>3</sub><sup>-</sup> therapy does not improve the outcome in diabetic ketoacidosis ... " Life-threatening is the most severe stage of diabetic ketoacidosis, coma. If the treatment of diabetic ketoacidotic coma included also infusions of alkalizing solutions, lethality was zero %, e g<sup>4)</sup>. Without alkalizing solutions, lethality was

up to 100%, e g<sup>5)</sup>. Again, it would be perhaps interesting to know why the author did not comment the papers of Wagner et al.<sup>4)</sup> and Basu et al.<sup>5)</sup>.

- 1) Oh YK: Acid-Base Disorders in ICU Patients. *Electrolyte Blood Press* 8:66-71, 2010
- 2) Edge JA, Roy Y, Bergomi A, et al.: Conscious level in children with diabetic ketoacidosis is related to severity of acidosis and not to blood glucose concentration. *Pediatr Diabetes* 7:11-15, 2006
- 3) Van Nimmen D, Weyne J, Demeester G, Leusen I: Local cerebral glucose utilization in systemic acidosis. *Am J Physiol* 247: R639-645, 1984
- 4) Wagner A, Risse A, Brill HL, et al.: Therapy of severe diabetic ketoacidosis. Zero-mortality under very-low-dose insulin application. *Diabetes Care* 22:674-677, 1999
- 5) Basu A, Close CF, Jenkins D, Krentz AJ, Natrass M, Wright AD: Persisting mortality in diabetic ketoacidosis. *Diabet Med* 10:282-284, 1993

### Viktor Rosival

SYNLAB Department of Laboratory Medicine, Dérer's Hospital, Limbová 5, SK-833 05 Bratislava, Slovakia, Europe.

**Correspondence:** Viktor Rosival, SYNLAB Department of Laboratory Medicine, Dérer's Hospital, Limbová 5, SK-833 05 Bratislava, Slovakia, Europe.  
E-mail: rosivalv@hotmail.com

*Electrolyte Blood Press* 9:38, 2011 doi: 10.5049/EBP.2011.9.1.38