

Treatment of lactic acidosis

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Abstract

Severe lactic acidosis is often associated with poor prognosis. Recognition and correction of the underlying process is the major step in the treatment of this serious condition. Intravenous administration of sodium bicarbonate has been the mainstay in the treatment of lactic acidosis. Aggressive use of this therapeutic modality, however, can lead to serious complications and should therefore be considered with caution. Peritoneal dialysis and hemodialysis provide large amounts of alkali without causing the hypernatremia or hypervolemia commonly associated with bicarbonate infusion. Peritoneal dialysis with bicarbonate-based dialysate, in particular, appears to be an ideal means of delivering physiologic buffer. Administration of methylene blue was initially thought to increase lactate metabolism by altering the cellular oxidative state. Its subsequent clinical use, however, showed little efficacy. Sodium nitroprusside has been advocated for the treatment of some forms of lactic acidosis as a method of alleviating regional hypoperfusion. Insulin therapy has been found to be quite useful in the treatment of phenformin-associated lactic acidosis and is recommended in this setting. Since dichloroacetate activates pyruvate dehydrogenase and enhances lactate metabolism, it may be a useful adjunct in the treatment of lactic acidosis.