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Metabolic acidosis review pdf

Arterial blood gas analysis is used to assess and monitor the patient's acid base status. Disruption of acid-base balance is classified into one of four main types depending on pH, pCO₂ (a) and bicarbonate results generated during blood gas analysis; The four types are respiratory acidosis, respiratory alkalosis, metabolic acidosis and metabolic alkalosis. A recent review article focuses on one of these disorders, metabolic acidosis, which is characterized by primary reduction in bicarbonate and compensatory reduction in pCO₂ (a). pH can either be reduced (if the compensation is incomplete) or normal (if the compensation is completed). This comprehensive, comprehensive review includes discussion of epidemiology, pathophysiology, clinical consequences and management of metabolic acidosis. The authors distinguish acute metabolic acidosis (lasting hours/days) from the much less common, chronic metabolic acidosis, which can last for many years. Acute metabolic acidosis is a common feature of severe disease; a study cited in the review suggests that it affects around two-thirds of all patients admitted to intensive care. In broad terms, metabolic acidosis occurs as a result of net loss of bicarbonate or excessive addition of acid. Discussion of pathophysiology includes detailed assessment of the role of the kidneys in regulating acid base balance, with a particular focus on mechanisms involved in the maintenance of sufficient bicarbonate in the blood to buffer metabolic acids. Separating pure metabolic acidosis from a mixed respiratory/metabolic acidosis on the basis of hypoventilational response (that will want the extent of the reduction in pCO₂(a)) to be a focus of the diagnostic section. The value of measuring anion gap in identifying the cause of metabolic acidosis is also discussed, and the review contains a useful list of other laboratory tests useful for identifying the cause of metabolic acidosis. The many side effects of acute metabolic acidosis discussed in this review include, decreased cardiac production, hypotension and change in mental status. Chronic metabolic acidosis can lead to accelerated progression of kidney disease, disordered bone metabolism and muscle wasting. Discussion of treatment focuses on the controversies surrounding the use of sodium bicarbonate to correct acute metabolic acidosis; the authors give their detailed recommendations. The use of bicarbonate to correct chronic metabolic acidosis is apparently not controversial. Supported by 123 references, this paper provides a useful overview of many aspects of metabolic acidosis. 1.Kimmoun A, Novy E, Auchet T, Ducrocq N, Levy B. Hemodynamic consequences of severe lactic acidosis in shock conditions: from bench to bed. *Crit Care Lond Engl.* 2015;19:175.Article Google Scholar 2.Kraut JA, Madias NE. 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