

A Clinical Study of Metabolic Acidosis in Benign Convulsions with Mild Gastroenteritis

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Abstract : Benign convulsions with mild gastroenteritis (CwG) are a commonly observed convulsive disorder characterized by : (1) onset before 3 years of age ; (2) mild dehydration ; (3) frequent seizures ; (4) normal laboratory examination results ; (5) normal interictal electroencephalography ; and (6) a consistently good prognosis. While the etiology of CwG is currently unknown, blood gas analysis, a standard lab test procedure, has never been investigated as a possible cause. The aim of this study is to reveal the clinical features associated with the metabolic acidosis of CwG. Here, we report CwG the blood gas analyses in a retrospective clinical study of 52 children. Fifty-five patients were placed in two groups : the metabolic acidosis group (A), 25 patients, and the normal group (N), 27 patients. There were significant differences between the two groups' Base Excess. The A group's decreased markedly in comparison with the N group's. Average A decrease was -7.6 ± 2.6 mEq/L ; average N decrease was -3.7 ± 2.7 mEq/L. This, however, was the only significant difference between the two groups. Age of onset, number of seizures per episode, average seizure duration, seizure prognosis, level of blood glucose, serum Na^+ , serum K^+ , serum Cl^- , HCO_3^- and Anion Gap were similar in both groups. In this study, although the relationship between CwG and metabolic acidosis remained unclear, we found metabolic acidosis, which had not previously been recognized as a mild gastroenteritis, in 48% (25/52) of our CwG patients.

Key words : Benign Convulsions with Mild Gastroenteritis, Blood Gas Analysis, Metabolic Acidosis, Sodium Channel