

## Abstract

We conducted a controlled, prospective trial to evaluate the effectiveness of rapidly infusing sodium bicarbonate ( $\text{NaHCO}_3$ ) and salt-poor albumin into high-risk, premature infants in the first 2 hours of life. Fifty-three infants, randomized into one of four treatment groups, received 8 ml. per kilogram of a solution containing either (A) glucose in water, (B) salt-poor albumin, (C)  $\text{NaHCO}_3$ , or (D) a combination of albumin and  $\text{NaHCO}_3$ . After the initial infusion, the babies received no colloid or alkali solutions until 4 hours of age. We managed them supportively with warmth, appropriate oxygen administration, isotonic fluid infusion, and close monitoring. Among the infants who received alkali, 14 of 26 acquired the respiratory distress syndrome (RDS), 11 died, and four had intracranial hemorrhage. Among babies who received no alkali, RDS occurred in 11 of 27, 5 died, and none had intracranial hemorrhage. These results do not support the common practice of rapidly infusing  $\text{NaHCO}_3$  into high-risk, premature infants, and they suggest that the early management of such infants needs renewed critical evaluation.