Continuous Insulin Infusion is Preferred Method for Managing Diabetics

To the Editor:—We would like to comment on the article written by Dr. Walts et al.,1 in the August 1981 issue of ANESTHESIOLOGY. Although the study was generally well-done, we thought the details of the administration of insulin were somewhat confusing. Apparently, 10 units of regular insulin were given “not more than” every two hours if the plasma glucose concentration rose above 200 mg/dl. If the plasma glucose concentration rose above 400 mg/dl, the management was considered a “failure” (which is confusing), and 20 units of regular insulin were injected intravenously. If the plasma glucose fell below 60 mg/dl, this also was considered a “failure”. Thus, the details of administration, the key to the article, were too brief.

Furthermore, the author’s method of intermittent bolus injections of insulin is obsolete and may have contributed to the hypoglycemia experienced by Group 3 patients. For several years continuous infusions of insulin have been used during surgery,2-4 and obstetrics5 (we have been using it for six months). Our method, briefly, is to administer 5 per cent glucose 125 ml/h, with potassium chloride 4 mEq/h. Blood glucose is checked every 30 min. A bolus of regular insulin, 0.05 units/kg, is given intravenously just after induction of anesthesia. A continuous infusion of insulin is adjusted as follows: if blood glucose falls below 100 mg/dl: 1 unit/h; if blood glucose exceeds 200 mg/dl: 3 units/h; and if blood glucose exceeds 300 mg/dl: 4 units/h. Other adjustments are made with glucose and insulin as the blood sugar varies.

The method advocated by Dr. Walts may be superior to subcutaneous injection; however, in our experience, and that of others,2-4,6 control of the blood glucose can best be maintained by a constant insulin infusion with rapid glucose monitoring.

RICHARD B. CLARK, M.D.
Professor
Departments of Anesthesiology and Obstetrics-Gynecology

ASTRIDE B. SEIFEN, M.D.
Associate Professor
Department of Anesthesiology

RICHARD M. JORDAN, M.D.
Assistant Professor
Department of Medicine, Division of Endocrinology
University of Arkansas for Medical Sciences
Little Rock, Arkansas 72205

REFERENCES
An Unusual Cause of Leakage in an Anesthesia System is More Usual Than It Should Be

To the Editor:—It is with interest that I read the letter about an unusual cause of leakage in an anesthesia system by Wolf et al.1 This problem was reported by myself four years ago,2 and has since been detected six times in our operating rooms. Perhaps it is not so unusual after all.

I am in agreement with Wolf and co-workers that there is a major fault in design when the gas delivered by the ventilator passes through the structure used to support the ventilator. Also of concern is the fact that this problem was first reported four years ago and we are not aware of any steps the manufacturer (Narco Medical Services) may have taken to inform anesthetists of this potential problem or to change the design of the support structure.

STEVEN H. ROLBIN, M.D.C.M., F.R.C.P.(C)
Assistant Professor of Anaesthesia
University of Toronto
Toronto, Ontario
Canada

References

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