

## Compliance to glucose management protocol during intra-operative care in an academic medical center

**Mayumi Horibe**

Department of Anesthesiology and Pain Medicine, University of Washington / VA Puget Sound Health Care System, USA

Optimal perioperative glucose control has been shown to improve clinical outcome in surgical patients. To manage patient's glucose level during the perioperative period, institutions employ insulin infusion algorithms. Poor adherence to an adopted algorithm has been shown as a main contributor to inadequate glucose control. We conducted a retrospective analysis of the compliance of anesthesia providers in following institutional glucose control protocol intraoperatively. After IRB approval, data related to blood glucose levels and insulin doses were extracted from the University of Washington (UW) Anesthesia Information Management System (AIMS) database for the year 2011. Data analysis was conducted to evaluate the incidences of hypoglycemia ( $<70$  mg/dL) and hyperglycemia ( $>180$  mg/dL), and the success in performing hourly glucose measurements and adjusting insulin infusion per the standard protocol. These measures were computed for the entire surgical population and for different sub-specialties (General: G, Neuro: N, Cardiac: C and Liver transplant: L). Glucose level was checked 9529 times among 2617 cases. 11 cases developed hypoglycemia. The number of hyperglycemic measurements was 24% (G 18%, N 13%, C 34%, L 42%). Overall compliance to hourly glucose measurements (tolerance  $\pm 15$  minutes) was 74% (G 57%, N 55%, C 87%, L 75%). Overall compliance to successful insulin adjustments (tolerance  $\pm 0.5$  U/Hr) as prescribed by the UW algorithm was 27% (G 24%, N 31%, C 14%, L 19%). In summary, compliance to institutional glucose control protocol is inconsistent as measured by hourly glucose management and protocol driven insulin dosing.

### Biography

Mayumi Horibe has completed anesthesiology residency both in Japan and United States, and finished anesthesiology research fellowship at Cleveland Clinic in 1999. Currently, she is an assistant professor in the Department of Anesthesiology and Pain Medicine, University of Washington and is a director of anesthesiology residents' education at VA Puget Sound Health Care System. She is a member of ASA, IARS, SCA, Diabetes Technology Society and Japan Society of Anesthesiology. She has published more than 25 manuscripts in anesthesiology-related journals.

mayuminair@yahoo.com