

Clinical Inertia during Postoperative Management of Diabetes Mellitus: Relationship between Hyperglycemia and Insulin Therapy Intensification

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Abstract

Objective:

Our objective was to assess the application of insulin regimens in surgical postoperative patients with diabetes.

Methods:

A chart review was conducted of patients with diabetes who were hospitalized postoperatively between January 1 and April 30, 2011. Analysis was restricted to patients hospitalized for ≥ 3 days and excluded cases with an endocrinology consult. Insulin regimens were categorized as “basal plus short acting,” “short acting only,” or “none,” and the pattern of use was evaluated by hyperglycemia severity according to tertiles of both mean glucose and the number of glucose measurements >180 mg/dl.

Results:

Among cases selected for analysis ($n = 119$), examination of changes in insulin use based on tertiles of mean glucose showed that use of basal plus short-acting insulin increased from 10% in the lowest tertile (mean glucose, 120 mg/dl) to 18% in the highest tertile (mean glucose, 198 mg/dl; $p < .01$); however, 70% of patients in the highest tertile continued to receive short-acting insulin only, with 12% receiving no insulin. Intensification of insulin to a basal plus short-acting regimen was also seen when changes were evaluated by the number of measurements >180 mg/dl ($p < .01$), but 70% and 12% of patients in the highest tertile still remained only on short-acting insulin or received no insulin, respectively.

Conclusions:

Use of basal plus short-acting insulin therapy increased with worsening hyperglycemia, but many cases did not have therapy intensified to the recommended insulin regimen—evidence of clinical inertia. Strategies should be devised to overcome inpatient clinical inertia in the treatment of postoperative patients with diabetes.

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