

Failure to Control Hyperglycemia in NonCritically Ill Diabetes Patients Despite Standard Glycemic Management in a Hospital Setting

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Abstract

Background:

Successful control of hyperglycemia has been shown to improve outcomes for diabetes patients in a clinical setting. We assessed the quality of physician-based glycemic management in two general wards, considering the most recent recommendations for glycemic control for noncritically ill patients (<140 mg/dl for premeal glucose).

Methods:

Quality of glycemic management of 50 patients in two wards (endocrinology, cardiology) was assessed retrospectively by analyzing blood glucose (BG) levels, the glycemic management effort, and the online questionnaire.

Results:

Glycemic control was clearly above the recommended target (mean BG levels: endocrinology: 175 ± 62 mg/dl; cardiology: 186 ± 68 mg/dl). When comparing the first half with the second half of the hospital stay, we found no difference in glycemic control (endocrinology: 168 ± 32 vs 164 ± 42 mg/dl, $P = .67$; cardiology: 174 ± 36 mg/dl vs 170 ± 42 mg/dl, $P = .51$) and in insulin dose (endocrinology: 15 ± 14 IU vs 15 ± 13 IU per day, $P = .87$; cardiology: 27 ± 17 IU vs 27 ± 18 IU per day, $P = .92$), despite frequent BG measurements (endocrinology: 2.7 per day; cardiology: 3.2 per day). A lack of clearly defined BG targets was indicated in the questionnaire.

Conclusion:

The recommended BG target range was not achieved in both wards. Analysis of routine glycemic management demonstrated considerable glycemic management effort, but also a lack of translation into adequate insulin therapy. Implementation of corrective measures, such as structured treatment protocols, is essential.

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Abbreviations: (BG) blood glucose, (IU) international units, (SD) standard deviation

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