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REBUTTAL

Rebuttals to "The Debate on Insulin vs. Non-insulin Use in the Hospital Setting—Continued Use of Insulin or Time to Revise the Guidelines?"

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Rebuttal by Smita Kumar and Mark E. Molitch to:

Title: Debate on Insulin vs. Non-insulin Use in the Hospital Setting—Is It Time to Revise the Guidelines for the Management of Inpatient Diabetes?
Authors: Francisco J. Pasquel, MD, MPH; Maya Fayfman, MD; Guillermo E. Umpierrez, MD, CDE

Comments:
We agree that there are few data showing the benefits and safety of using sulfonylureas, glinides, metformin, and pioglitazone in inpatients with a number of potential adverse consequences of such use. While some studies discussed by Dr. Pasquel et al. have shown that dipeptidyl peptidase-4 (DPP-4) inhibitors and liraglutide can be safely used in inpatients, most of the studies excluded patients on glucocorticoids, who were in ICUs, who had liver, kidney, gall bladder, or pancreatic disease and who were not taking nutrition orally. Thus, this would limit the use of these agents from the majority of inpatients. In addition, the studies that showed adequate glycemic control omitted the first 24 h after admission of glucose data, suggesting that these agents are unable to achieve immediate glucose control on admission. Insulin is able to achieve immediate glucose control and is easily titratable for patients with complex and daily changing clinical contexts and therefore should remain the initial glycemic treatment of choice for most patients. While hypoglycemia is certainly a risk of insulin therapy, it can be minimized by using validated protocols in the hospital. Once glycemic control is obtained with insulin, it is possible control may be able to be continued with DPP-4 inhibitors or glucagon receptor agonists alone or in combination with basal insulin in some patients who did not require high doses of insulin and who need prolonged hospital stays.

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Rebuttal by Francisco J. Pasquel, Maya Fayfman, and Guillermo E. Umpierrez to:

Title: Use of Insulin in the Inpatient Setting: Need for Continued Use
Authors: Smita Kumar, MD, Mark E. Molitch, MD

Comments:
We agree that the population of hospitalized patients with diabetes is diverse, but we challenge the idea that all patients admitted to the hospital with a pre-existing diagnosis of diabetes should be immediately initiated on complex insulin regimens. In controlled settings (i.e., clinical trials enrolling patients with hyperglycemia), insulin therapy can achieve good glycemic control in most patients; however, the rate of hypoglycemia can reach up to 30%. In clinical practice, glycemic control is commonly worse when compared to findings from randomized controlled trials using insulin therapy, likely related to the lack of comfort of practitioners using complex insulin regimens and because of the fear of iatrogenic hypoglycemia. We agree with Drs. Kumar and Molitch that patients with high glucose values certainly will benefit from insulin therapy, especially if blood glucose levels are above 200 mg/dL or hemoglobin A1c (HbA1c) is above 9%. Many patients with severe hyperglycemia (i.e., admission HbA1c > 9%) will still fail common insulin regimens, and more research is needed to find the most appropriate protocols for such patients. Despite lack of efficacy and safety data and the recommendations from professional associations, oral agents are still commonly used worldwide. In recent years, results from multiple clinical trials utilizing different agents clearly show that patients with mild to moderate hyperglycemia can be safely treated with DPP-4 inhibitors. This approach is a more convenient alternative to the labor-intensive basal–bolus insulin regimen, and is likely safer in patients at risk of hypoglycemia (i.e., patients with good metabolic control treated with oral agents at home).

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