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Abstracttitel: Elevated HbA1c in non-diabetic patients and length of stay after cardiac surgery

Elevated Preoperative HbA1c in Non-diabetic Patients is associated with Prolonged Length of Stay after Cardiac Surgery

Purpose:

Diabetes mellitus is an independent risk factor for complications after cardiac surgery. The proportion of patients undergoing cardiac surgery that have undiagnosed or latent diabetes, and the risk that this represents, is unknown. Elevated glycosylated hemoglobin (HbA1c) is an index of persistent hyperglycemia. We hypothesized that an elevated preoperative Hb1Ac might be an indicator of perioperative risk in patients undergoing cardiac surgery with diagnosed and undiagnosed diabetes.

Methods

After IRB approval we measured preoperative HbA1c in 355 patients undergoing cardiac surgery. An HbA1c level > 6.5% was considered to be elevated. Results are expressed as mean \pm SD.

Results:

Of the 355 patients enrolled, 103 patients (29.0% of total) had a preoperative HbA1c >6.5%. Of these, 61 (22.5% of total) had diagnosed diabetes and 42 (15.3% of total) did not have this diagnosis. Compared to patients with no diabetes and a normal HbA1c, non-diabetic patients with elevated HbA1c had a similar Parsonnet score (10.2 ± 7.7 vs. 9.7 ± 8.7 , $p = 0.71$) but a significantly longer hospital length of stay (LOS): 7.0 ± 7.2 vs. 11.8 ± 13.0 days, $p=0.006$.

Conclusions:

More than 15% of the patients in this study had preoperative elevation of HbA1c levels without a prior diagnosis of diabetes mellitus. These patients had a significantly longer hospital LOS, suggesting that patients with undiagnosed diabetes and preoperative hyperglycemia may be at a higher risk for postoperative complications. It appears prudent to include assessment of HbA1c in the workup of patients prior to cardiac surgery even if they do not have an existing diagnosis of diabetes. Further studies are required to evaluate whether hospital LOS may be improved by deferring elective cardiac surgery until normalization of HbA1c by glycemic control is achieved.