

## Association between HbA1c and clinical outcomes of coronary artery bypass grafting “about”

*HbA1c ile koroner arter bypass greftleme ameliyatının klinik sonuçları arasındaki ilişki “hakkında”*

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Dear Editor,

I read with great interest the valuable study by Durmaz and Özen, published in the latest issue of Pamukkale Medical Journal, which investigated the relationship between preoperative HbA1c levels and postoperative complications in patients undergoing isolated coronary artery bypass grafting (CABG). The study's emphasis on HbA1c's role in predicting complications such as sternal wound infection and atrial fibrillation is clinically relevant [1]. However, I believe there are several methodological and interpretative points that warrant further discussion.

### 1. The Confounding Effect of Euroscore:

Table 1 of the authors' data reveals that the group with the highest HbA1c (>6.5%) had a statistically significantly higher Euroscore compared to the other groups ( $p<0.001$ ) [1]. The Euroscore is one of the most critical preoperative risk stratification tools for predicting post-CABG complications. This raises a crucial question: Are the higher complication rates directly attributable to the elevated HbA1c, or are they a consequence of the overall higher risk profile of this patient group, as indicated by the high Euroscore? Clearly stating whether the authors included Euroscore as a confounding variable in the logistic regression analysis would have enhanced the validity of the inferences regarding the independent predictor role of HbA1c.

**2. Discrepancy in Glycemic Control Thresholds:** The grouping thresholds used for HbA1c in the study (<5%, 5-6.5%, >6.5%) deviate from international guidelines, such as those from the American Diabetes Association (ADA), which define pre-diabetes (5.7%-6.4%)

and diabetes (>6.5%) [2]. The choice of a low threshold like <5% makes the patient population less comparable to other studies in the literature.

3. The Unaddressed Role of Stress Hyperglycemia: Although the study is retrospective, there is substantial evidence in the literature suggesting that stress hyperglycemia, particularly when evaluated through the stress hyperglycemia ratio (SHR), may be a stronger predictor of postoperative outcomes than chronic glycemic control (HbA1c) alone in patients undergoing CABG [3]. It has been noted in some studies that HbA1c alone may be limited in terms of evaluating postoperative risks [4]. Discussing the findings in light of the current literature on stress hyperglycemia would enrich the clinical implications of the study.

In conclusion, the work by Durmaz and Özen [1] highlights the importance of HbA1c in CABG patients. However, presenting the findings after controlling for powerful confounders like Euroscore and discussing the acute versus chronic aspects of glycemic control in the context of current literature would further strengthen the scientific contribution of this valuable study.

Human rights statements and informed consent: All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of 1964 and its later amendments.

### References

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