

## Correlation between Glycated Hemoglobin and Venous Blood Sugar in Diabetic Patients Monitored in Abidjan

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### ABSTRACT

The aim of this study was to determine the correlation between glycated haemoglobin (HbA1C) and blood sugar levels in diabetic subjects carried out in Abidjan. This cross-sectional study included 100 patients with diabetes monitored, for three months, for whom glycated blood glucose and hemoglobin were performed, this after informed consent of the patients. Pearson and Spearman correlation tests were used, at the 5% threshold. The patients with normal HbA1C and normal blood glucose accounted for 55.34% and 32% respectively. A sedentary lifestyle and body mass index >25 kg/m<sup>2</sup> were associated with a significant increase in the risk of increased blood glucose and HbA1C. The presence of a complication was associated with a 3.06-fold higher risk of high HbA1C (p=0.0073), while blood glucose was not significantly associated with the onset of complications. HbA1C was significantly correlated with blood glucose with a correlation coefficient of 0.4412 (p=0.0001). In multivariate analysis, hyperglycemia was significantly associated with alcohol consumption and non-compliance with antidiabetic treatment. Poor compliance was significantly associated with increased HbA1C (>7%) and tobacco consumption. The HbA1C was highly correlated with blood sugar and was found to be a better predictor of diabetes complications than glycemia.

**Keywords:** Diabetes mellitus, Glycated hemoglobin (HbA1C), Blood sugar, Abidjan, Côte d'Ivoire

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