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Evaluation of HbA1c Level Correlation with Complications and Morbidities of Elective Surgeries in Diabetic Patients in Sablan Hospital, Ardabil in 2022

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Introduction :

Diabetes is a metabolic and chronic disease. This disease has three main types: type 1, type 2 and GDM. This disease is an important risk factor in terms of causing complications after surgery, so that it increases the risk of infection and increases morbidity and mortality. The purpose of this research is to evaluate of HbA1c level correlation with complications and morbidities of elective surgeries in diabetic patients.

Methods:

In this case-control study, 189 diabetic patients referred to Sabalan Hospital of Ardabil for elective surgery in the year 2022 were investigated. Patient information was collected retrospectively based on medical records and self-reported. In addition to demographic information, patient tests (including HbA1c), post-operative complications and morbidities, as well as hospitalization outcome of statistical sample patients in two case groups with hemoglobin A1c of seven and above and control group with HbA1c below seven have been collected. The information was recorded in a researcher-made checklist and entered into SPSS-24 statistical software, and statistical analysis was done on this information. This research was approved by the ethics committee of IAU.ARDABIL (IR.IAU.ARDABIL.REC.1400.075).

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Result:

In our study, 189 patients including two groups with HbA1c level of 7 or more and less than 7 were studied. There was no significant difference between the two groups of patients in terms of gender, the type of drugs used for diabetes and the type of surgery. According to the results, only the operation site infection had a significant difference in the two groups, and the OR rate was recorded as 2.41. Re-surgery was higher in the case group, but the p-value was not evaluated as significant. Other cases such as mortality, acute kidney failure, acute coronary syndromes, dysrhythmia, stroke, non-operative infection, readmission and length of hospital stay were not significantly different between the two groups.

Discussion & Conclusion:

Finally, it can be stated that in this study, no definitive relationship between preoperative HbA1c and postoperative complications (except surgical site infection) was shown in patients with diabetes.

