

CORRELATION OF HbA1C IN ASSOCIATION WITH DIFFERENT COMPLICATIONS OF DIABETES

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ABSTRACT

Aims

This present research paper attempt to know the correlation between HbA1c in association with various Complications of diabetes.

Methods

A retrospective cross-sectional study was conducted at Department of Medicine, BGS Global Institute of Medical Science, Bengaluru during the year 2016-2018. A total of 120 patients were considered for the study (defined sample size calculated with marginal error 20% and level of significance alpha is 0.05). All patients were meet inclusion and exclusion criteria. Exclusion criteria; terminal illness, patients who are suffering from chronic illness and ICS (ICS) etc. The HbA1c parameter was collected at different time intervals, complications, drug adherence, adverse drug reaction, duration of diabetes, diabetes-associated illness and co morbidity and mortality data were collected from the structural data sets. The collected data was analyzed by using R-programming language-open source software. The multiple logistic regression was employed to test the hypothetical results

Results

As per the resulted findings, the mean duration of diabetes was 12.85 with SD 3.26 Years. The duration of diabetes <5 (7.50%) years a smaller proportion will not be any global changes for the incidence of diabetes & associated complications when compared with an increased duration between 6-10 years (18.33%); 11-15 years (26.67%) and >=16 (47.50%). Increased perpetuation was found to be strongly associated with diabetes complication at the onset of mean age 53.21 years $p < 0.01$. The cardiovascular disease (CVD) (5.00%), coronary heart disease (CHD) (3.33%), Ischemic stroke (2.50%) and diabetes microvascular complications (6.67%) were found to be statistically significant $p < 0.01$ with elevated reference range of HbA_{1c} 6.85-7.00 mmol/L, the overall incidence of diabetes complications was 17.50%.

Conclusions

The present study concludes that the HbA1c target of >7.0 mmol/L might be too high for some patients and geometrically progressed diabetes-associated complications, in HbA1c levels should be approached cautiously

KEYWORDS: HbA1c, CHD, CVD, Glycated Hemoglobin, RBC

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