Short Communication
Volume 5:3, 2020

Journal of Diabetic Complications and Medicine

Open Access

Diabetes 2018- Analysis of Hypoglycemic Episodes in Diabetics in Africans Using Ademolus Classification of Hypoglycemia (ACH) - Adegbenga B Ademolu - Lagos State University Teaching Hospital

Alyson Evans Adegbenga B Ademolu

Lagos State University Teaching Hospital

Abstract

Hypoglycemia as a management complication of diabetes mellitus is a world wide experience .Though concerted efforts have been made by endocrinologist, health workers and patients to reduce hypoglycemic episodes yet its occurrence and recurrence despite these efforts cannot be overemphasised. The glycemic thresholds for symptoms of hypoglycemia (among other responses) shift to lower plasma glucose concentrations after recent antecedent hypoglycemia and to higher plasma glucose concentrations in patients with poorly controlled diabetes and infrequent hypoglycemia . Hypoglycemia in people living with diabetes mellitus in Africa is an uncharted territory in literature. To add to the existing knowledge in this area in Africa therefore, a number of questions will be addressed using Ademolus Classification of Hypoglycemia (ACH)Evaluation 1 has dominatingly adrenergic highlights, grade 2 has adrenergic highlights with neuroglycopenic include cover, grade 3 has prevalently neuroglycopenic highlights that are significantly reversible while grade 4 has overwhelmingly neuroglycopenic highlights with significantly irreversible cerebrum harm.

Hypoglycemia as an administration intricacy of diabetes mellitus (DM) is an overall encounter. In Africa, hypoglycemia is an unknown domain in writing. In this manner, the accompanying inquiries will be tended to utilizing Ademolus Classification of Hypoglycemia (ACH). Which is the commonest and the least regular evaluation of hypoglycemia in DM African patients? Which evaluation of hypoglycemia is seen ordinarily in type 1 and in type 2 diabetics?

Strategies: This is a review study that investigations 203 recorded hypoglycemic scenes in Africans with DM more than 9 years time frame. Utilizing a poll on 50 case documents contemplated. Hypoglycemia was characterized as a glucose of 70 mg/dl or less

Results:

It ought to be noticed that the examination is that of 203 recorded hypoglycemic scenes in 50 diabetics. The male to female proportion was 1:1.43 of the diabetics had type ll while 7 had type l DM. The age scope of the patients concentrated over the nine years 3 months time spans was 18 to 95 years, the age range among those with type l was 18-56years,while among the type ll it was 38-95years. The type 2 diabetics involved in this study had a total of 167 documented episodes of hypoglycemia while those with type l had 36 documented episodes. ln all these Africans, the average documented hypoglycemic episodes per patient was 4 episodes. Among the type 2 patients, the average hypoglycemic episodes is equally approximately 4 episodes per diabetics, while among the type l the average hypoglycaemic episodes are 5 per diabetic. The lowest documented hypoglycemia amongst type l diabetics in this study was 21mg/dl (grade 3 hypoglycemia) which was a nocturnal hypoglycemia that occurred at 1:00am while the lowest documented hypoglycemia amongst type 2 was 20mg/dl (grade 3 hypoglycemia) which was a fasting blood sugar documented at 6:00am.There was no record of grade 4 hypoglycemia in both type 1 and type2 diabetes mellitus patients in this African study. Now by using Ademolus Classification of Hypoglycemia to analyse the 203 hypoglycemic episodes,45.32% had grade 1 hypoglycemia,35.47% had grade 2 hypoglycemia while 19.21% had grade 3 hypoglycemia (Figure 1). With respect to the 167 episodes seen in type 2 diabetic, 48.50% had grade l hypoglycemia,35.93% had grade 2 hypoglycemia while 15.57% had grade 3 hypoglycemia (Figure 2).

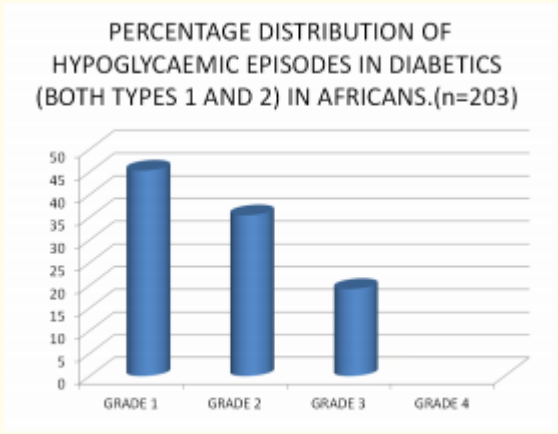

Figure 1

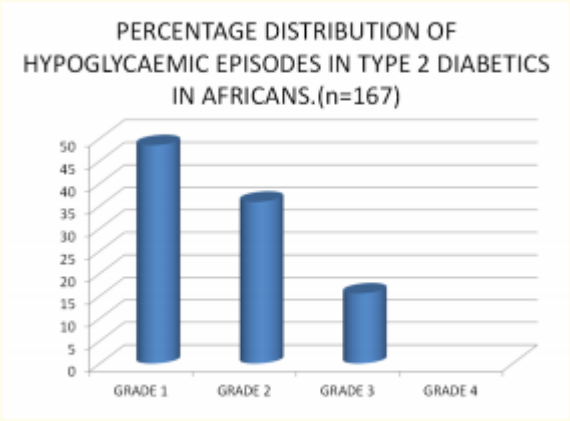

Figure 2

A total of 127 hypoglycemic episodes were recorded in type 2 diabetes mellitus patients on insulin therapy alone. Of these 53.54% had grade 1 hypoglycemia, 31.50% had grade 2 hypoglycemia while 14.96% had grade 3 hypoglycemia (Figure 3).

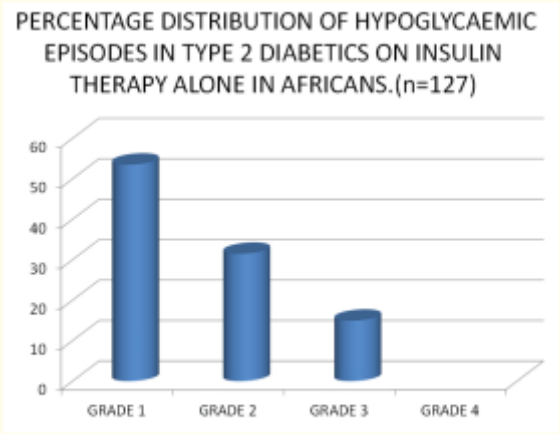

Figure 3

The type 2 diabetics on both insulin and glucose lowering agents had 39 episodes of hypoglycemia recorded out of which 33.33% had grade 1 hypoglycemia,48.72% had grade 2 hypoglycemia while 17.95% had grade 3 hypoglycemia (Figure 4). Type 2 diabetics on glucose lowering agents alone could not be characterised by percentages of grade present as only one diabetic with one episode of hypoglycemia (grade 3) was involved in the study

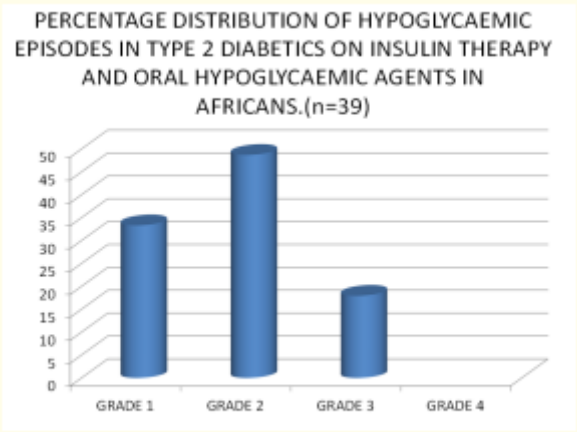

Figure 4

The patients with type 1 diabetes mellitus had 36 hypoglycemic episodes, 30.50% of these were grade 1, 33.33% were grade 2 while 36.11% were grade 3 hypoglycemia (Figure 5).

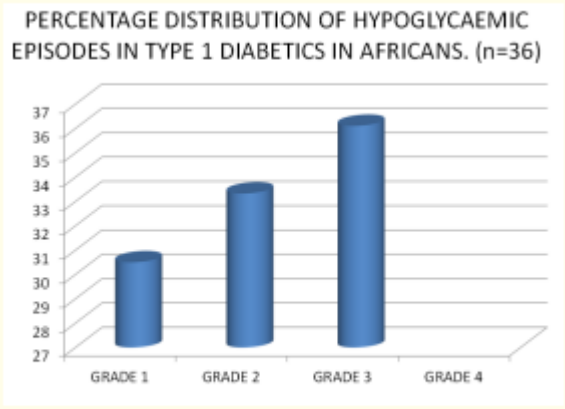

Figure 5

There was no episode of grade 4 hypoglycemia in both type 1 and type 2 diabetes mellitus Africans patients involved in this study. By using the ADA/EASD 2018 classification of hypoglycemia, only 197 episodes of hypoglycemia met the classification definition of hypoglycemia as 6 episodes had 70mg/dl and did not qualified for hypoglycemia as defined by the ADA/EASD 2018 Classification of hypoglycemia as Analytically using ADA/EASD classification to analyse all the 197 hypoglycemic episodes studied, 77 (39.09%) hypoglycemic episodes had level 1 hypoglycemia, 90 (45.69%) had level 2 hypoglycemia while 30 (15.22%) had level 3 hypoglycemia.

Conclusions:

Grade 4 hypoglycemia was not recorded in both type 1 and type 2 diabetes mellitus in this African study. The commonest grade of hypoglycemia is grade 1 in type 2 and grade 3 in type 1 diabetics. The least common grade in type 2 diabetes is grade 3 while in type 1 it is grade 1. A similar study is recommended in Americans, Europeans, Asians and all ethnic groups for possibly racial differences or disparity in the findings of this research.

This work is partly presented at 2nd International Conference on Diabetes and Diabetic Nursing Care September during 28-29, 2018 at Montreal, Quebec, Canada