Effectiveness of a Continuous Glucose Monitoring coupled with Self Monitoring of Blood Glucose Driven Online Counseling in Prediabetes patients- A Real World Retrosepctive study from North India.

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Objective: Pre diabetes is a growing metabolic disorder due to sedentary lifestyle, obesity and insulin resistance and leads to type 2 diabetes and its complications if left untreated. This study aim to assess the effectiveness of CGM accompanied by self monitoring blood glucose in assessing glycemic variability and the corresponding triggred online counseling in controlling prediabetes.

Methodology: In this retrospective, multi centric study, 250 Pre diabetes patients with BMI 26.46±4.93 kg/m^2 and HBA1C>5.7%<6.5% subjected to application of CGM device (Abbott Free style libre pro) for 14 days followed by SMBG for the next 16 days and the coreponding personalized counseling on balanced diet and exercise regime by a certified diabetes educator (CDE) were assessed. Normal glucose target range considered as 70-180 mg/dL while hypoglycemia was categorized as low (54-69 mg/dL) and very low (<54 mg/dL) and hyperglycemia as high (180-250 mg/dL) and very high (>250 mg/dL). Duration of time a patient in normal, hyperglycemia and hypoglycemia state was illustrated by CGM as time in range (TIR),time above range (TAR) and time below range (TBR).

Results: This individualized CDE counseling significantly reduced the average BG levels by 16.1%, average premeal BG values (115.7±29 to 94.0±10.4 mg/dL, 19% reduction; p<0.0001) and post meal values (152.0±79.7 to 123.7±70.9 mg/dL, 17.9% reduction; p<0.0001). Majority 90.8% showed no hypoglycaemic episodes (BG <70 mg/dL) and those in fasting, pre meal and post meal periods reduced by 81.4%, 72.3% & 67.8% respectively, post counselling. BG values in TIR improved by 12%, those in TAR reduced 13% and those in TBR reduced by 18%. The patients count with high glycemic variability (CV >36) was reduced from 27 to 21.

Conclusion: Digitally driven CGM coupled with SMBG triggered CDE counselling effectively controlled overall glycaemia & increased target-in-range glucose levels in pre diabetes subjects.

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Biography:



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