CONTROL ID: 2736959

TITLE: FLASH GLUCOSE MONITORING AS AN EFFECTIVE ENABLER TO IMPLEMENT LIFESTYLE INTERVENTION IN DIFFICULT TO TREAT TYPE 2 DIABETES PATIENTS

PRESENTATION TYPE: Original Research

CURRENT CATEGORY: Prediabetes/Diabetes Mellitus

AUTHORS (LAST NAME, FIRST NAME): Gonsalves, Bensley[1]; Hafizi, Imran[2]; Wadhwa, Navneet[3]

ABSTRACT BODY:

Objective: FreeStyle Libre Pro (TM), a Flash Glucose Monitoring (FGM) system has recently been marketed in India and is used to complement self-monitoring of blood glucose. Current treatment guidelines support the role of lifestyle modification, to achieve target glycemia in patients with type 2 diabetes mellitus (T2DM). The customised lifestyle intervention as early as one week of glucose monitoring through patient empowerment may boost the glycemic control.

Methods: In a cluster of 45 patients, on FGM system for 14 days, during the period from September 2016 - Februray 2017, we followed a clinical decision support mechanism to identify the eleven distinct patients who were difficult to treat (either with persistent hyperglycemia, reported hypoglycaemia, or diabetes related complications) for effectiveness analysis of the early lifestyle intervention at seven days of glucose monitoring. The patient driven lifestyle was intervened at seventh day to implement a precise physician led customised lifestyle intervention program for next seven days, without any modulation in the ongoing anti-diabetic agents. Mann-Whitney and Unpaired t test was used for statistical analysis.

Results or Case Presentation: The commonest clinical challenging scenarios were, nocturnal hypoglycaemia (n=4), post breakfast hyperglycemia (n=2) and persistent hyperglycemia (n=2). The mean estimated HbA1c values were 9.15% (minimum 5.7 %, maximum 16.3% , 95% CI 7.2,11). The mean daily no. of hours spent in hyperglycaemia was 5.8 hours (26.51% of the total time). The difference between the Average Glucose (AG) of first initial phase (patient driven) 226 mg/dl Vs the last seven days (physician led) 204 mg/dl was 22 mg/dl (decrease of 9.7%) The maximum reduction in AG after seven days of lifestyle intervention was 59 mg/dl (95% CI -39.06, - 5.22) (p=0.52). The mean % time in target was 4.3 hours (95% CI -2.65, 11.32; p=0.77). The mean difference in the % time below target (initial Vs last phase) was 3.04 % (p=0.52. 95% CI -4.56,10.47) and the mean difference in the % time above the target was 7.1% (p=0.52, 95% CI 32.49, 19.66)

Discussion: The implementation of the guideline directed lifestyle management, even in difficult to treat patients, is feasible through sensitisation to the patient to adopt healthy lifestyle is reemphasised in the real world setting. FGM through FreeStyle Libre Pro (TM) is an important tool to empower the physician to enable to provide the snapshot of the glucose monitoring to the patients to enable a customised lifestyle intervention.

Conclusion: Flash glucose monitoring enables lifestyle management - a difficult prescription to be followed, be adopted with relative ease, even in patients with difficult to control diabetes.

INSTITUTIONS (ALL):

1. Bliss Total Diabetes Care, Mumbai, Indonesia.
2. Millat Nursing home, Mumbai, Mumbai, India.
3. AUW Global, Mumbai, India.

Abstract Details

Author/Member Information (Late Breaking): International Fellow-in-Training

CAP Company or AACE Member Name: (none)

Copyright Transfer Agreement (Late): Yes

Financial Disclosure (Late Breaking): No

Industry Funded: No