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SAFETY OF SODIUM-GLUCOSE COTRANSPORTER 2 INHIBITORS DURING THE MONTH OF RAMADAN IN PATIENTS WITH TYPE 2 DIABETES MELLITUS FROM A TERTIARY CARE CENTRE IN KARACHI, PAKISTAN

Aisha Sheikh[1]✉, Bhagwan Das[2], Saadia Sattar[1], Najmul Islam[1]

1: Department of Medicine, The Aga Khan University Hospital, Karachi, Pakistan

2: Cancer Foundation Hospital, Karachi, Pakistan

Email✉: aisha.sheikh@aku.edu

ABSTRACT

OBJECTIVE: To assess the safety of Sodium-Glucose Cotransporter 2 Inhibitors (SGLT2-I) during the fasting month of Ramadan, in a real-life scenario, by finding the frequency and severity of severe hypoglycemia, hyperglycemia, dehydration, or diabetic ketoacidosis (DKA).

METHODS: This prospective, observational study was conducted at Aga Khan University Hospital, Karachi, Pakistan from 15th March to 30th June 2021. Known cases of Type 2 Diabetes Mellitus (T2DM), aging more than 18 years old and already on stable doses of SGLT2-I were included in study. Patients were assessed at one month before and within six weeks after Ramadan for the outcome measures.

RESULTS: Total of 101 participants were enrolled and because of pandemic, we were able to collect complete data on 84 (83.2%) participants. Majority (n=44; 52.4%) of participants were males. Mean age of patients was 52.4±9.5 years with an average duration of T2DM was 11.5±6.5 years. Most of the study participants (n=54; 64.3%) were on Empagliflozin (mean-dose=14.7±7.1 mg/day) and 30 (35.7%) participants were on Dapagliflozin (mean-dose=8.2±2.7 mg/day). Only six patients (7.1%) reported having mild hypoglycemia. No study participant had any severe hypoglycemia, hyperglycemia, dehydration or DKA that would have required hospital admission. Changes observed were in the HbA1c (7.6±1.2% from 7.9±2.4%, p=0.34), weight (78.1±13.1 Kgs from 78.7±13.4 Kgs, p=0.23) and in creatinine (0.9±0.2 mg/dl from 0.9±0.4 mg/dl, p<0.09) within six weeks post Ramadan.

CONCLUSION: SGLT2-I agents are safe and effective during the month of Ramadan in Pakistani patients with T2DM, without any additional adverse events.

KEY WORDS: Diabetes Mellitus, Type 2 (MeSH); Sodium-Glucose Transport Proteins (MeSH); Sodium-Glucose Cotransporter 2 Inhibitors (SGLT2-I) (Non-MeSH); Ramadan (Non-MeSH); Empagliflozin (Non-MeSH); Dapagliflozin (Non-MeSH); Hypoglycemia (MeSH); Hyperglycemia (MeSH); Dehydration (MeSH); Diabetic Ketoacidosis (MeSH).

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CONFLICT OF INTEREST

Authors declared no conflict of interest

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KMUJ web address: www.kmuj.kmu.edu.pk

Email address: kmuj@kmu.edu.pk