

## To compare the effect of Sodium-Glucose Cotransporter-2 inhibitors vs Dipeptidyl Peptidase-4 inhibitors on weight loss and glycemic control in patient with type 2 diabetes

Maryum Batool<sup>1</sup>, Muhammad Bilawal Abbas Janjua<sup>2</sup>, Maria Zafar<sup>3</sup>, Ali Sufyan<sup>4</sup>, Fiza Shafi<sup>4</sup>, Bushra Liaqat<sup>4</sup>

### ABSTRACT

**Objective:** To compare the efficacy of Dapagliflozin (Sodium-Glucose Cotransporter-2 inhibitors) and Sitagliptin (Dipeptidyl Peptidase-4 inhibitors) in terms of lowering body weight and improving glycemic control.

**Study Design:** Comparative analytical study.

**Place and Duration:** Department of General Medicine, Pakistan Institute of Medical Sciences, Islamabad over a period of 6 months from 1<sup>st</sup> October 2021 to 1<sup>st</sup> April 2022.

**Methodology:** Participants were assigned to receive either Dapagliflozin 10 mg daily (Group A, n=96) or Sitagliptin 100 mg daily (Group B, n=96) alongside ongoing therapy. Baseline data on demographics, diabetes duration, body weight, Glycated Hemoglobin (HbA1c) and Fasting Blood Sugar (FBS) were collected. Patients were followed for six months after which outcome variables were measured.

**Results:** A total of 192 patients were included, with 68.2% male and 31.8% female. Significant reduction in HbA1c was observed from baseline  $8.65 \pm 0.39\%$  to  $7.49 \pm 0.46\%$  ( $p < 0.001$ ) and from  $8.83 \pm 0.42\%$  to  $8.02 \pm 0.46\%$  ( $p < 0.001$ ) in both the groups A and B respectively. Both groups also had a significant decline in body weight and fasting glucose ( $p < 0.001$ ). Group A showed a greater reduction in all three parameters i.e. HbA1c, body weight and fasting glucose as compared to Group B ( $p < 0.001$ ).

**Conclusion:** SGLT-2 inhibitors outperform DPP-4 inhibitors in diabetes mellitus type 2 diabetes patients in terms of glycemic control, weight loss and body weight reduction.

**Keywords:** SGLT-2 Inhibitors, DPP-4 Inhibitors, Glycemic Control, Type 2 Diabetes Mellitus, Weight reduction, HbA1c.

### How to Cite This:

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