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THE EFFECT OF LUSEOGLIFLOZIN ON CARDIOMETABOLIC MARKERS IN PATIENTS WITH PREDIABETES (IMPAIRED GLUCOSE TOLERANCE): A PILOT STUDY

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Malathi Kerpaiah Karupiah,[1] Chin Siok Fong,[2] Norlaila Mustafa[3]

[1] *Department of Medicine, Pusat Perubatan Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia*

[2]*Academic and International Research Affairs, Pusat Perubatan Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia*

[3]*Pusat Perubatan Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia*

INTRODUCTION

Sodium glucose co-transporter inhibitors have been widely studied in type 2 diabetes mellitus and have proven to reduce cardiovascular risk and hospitalization for heart failure and promote weight loss. To date, there is no data on its use in prevention of cardiovascular events in prediabetes. We aimed to determine the effect of Luseoglifozin on cardiometabolic markers in patients with prediabetes (impaired glucose tolerance).

METHODOLOGY

We conducted an interventional study in the University Kebangsaan Malaysia Medical Center from May to March 2020.

RESULTS

A total of 29 patients with prediabetes were recruited. The mean age was 51.72 ± 9.29 years. There was a statistically significant difference in weight (81.96 ± 19.23 versus 78.07 ± 19.92 kg, p=0.000), ALT [26.00 (28.00) versus 19.00 (16.00) U/L, p=0.005], serum ferritin [149.4 (230.19) versus 109.25 (160.01) pmol/L, p=0.031] and plasma malondialdehyde (MDA) (8.94 ± 5.82 versus 6.11 ± 3.71 μmol/L, p=0.040). The sub-analysis of patients with elevated high-sensitivity C-reactive protein (hsCRP) (>3mg/L) showed a significant reduction of hsCRP post-treatment [6.40 (11.28) versus 3.42 (8.68) mg/L, p=0.007]. There was a significant association between changes in ferritin and hsCRP (r=0.905, p<0.001). There was an increase in trend in flow-mediated dilatation following treatment with Luseoglifozin, but this was not statistically significant.

CONCLUSION

In this study, Luseoglifozin was found to reduce serum ferritin, plasma MDA and body weight in patients with impaired glucose tolerance. hsCRP in the high-risk group was reduced after 16 weeks of treatment.