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Comparative studies of dipeptidyl peptidase 4 inhibitor vs sulphonylurea among Muslim Type 2 diabetes patients who fast in the month of Ramadan: A systematic review and meta-analysis

Huai Heng Loh[a,*], *Anne Yee*[b], *Huai Seng Loh*[c], *Norlela Sukor*[d], *Nor Azmi Kamaruddin*[d]

[a] *Faculty of Medicine and Health Sciences, University of Malaysia Sarawak, Jalan Datuk Mohd Musa, 94300 Kota Samarahan, Sarawak, Malaysia*
[b] *Department of Psychological Medicine, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia*
[c] *Clinical Academic Unit, Newcastle University Medicine Malaysia, No. 1, Jalan Sarjana 1, Kota Ilmu, Educity@Iskandar, 79200 Nusajaya, Johor, Malaysia*
[d] *Department of Medicine, Universiti Kebangsaan Malaysia Medical Center, Malaysia*

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ABSTRACT

Aim: To systematically review the literature to compare the use of DPP4 inhibitors vs sulphonylurea in type 2 diabetic Muslim patients who fast in Ramadan, with regards to its safety, tolerability, glycemic control, and body weight changes.
Methods: All English-language medical literature published from inception till October 2014 which met the inclusion criteria were reviewed and analyzed.
Results: A total of nine papers were included, reviewed and analyzed. The total sample size was 4276 patients. All studies used either of the two DPP4 inhibitors – Vildagliptin or Sitagliptin, vs sulphonylurea or meglitinides. Patients receiving DPP4 inhibitors were less likely to develop symptomatic hypoglycemia (risk ratio 0.46; 95% CI, 0.30–0.70), confirmed hypoglycemia (risk ratio 0.36; 95% CI, 0.21–0.64) and severe hypoglycemia (risk ratio 0.22; 95% CI, 0.10–0.53) compared with patients on sulphonylureas. There was no statistically significant difference in HbA1C changes comparing Vildagliptin and sulphonylurea.
Conclusion: DPP4 inhibitor is a safer alternative to sulphonylurea in Muslim patients with type 2 diabetes mellitus who fast during the month of Ramadan as it is associated with lower risk of symptomatic, confirmed and severe hypoglycemia, with efficacy comparable to sulphonylurea.

* *Corresponding author*. Tel.: +60 82 581000; fax: +60 82 665088.
E-mail address: hh_loh@yahoo.com.my (H.H. Loh).
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