

## INTISARI

**Latar Belakang:** Diabetes Melitus (DM tipe 2) adalah penyakit kronis progresif dengan penderita dan biaya obat yang terus meningkat setiap tahunnya. Pilihan terapi anti diabetes oral dan kepatuhan pasien pada terapi menjadi faktor penting dalam kontrol glikemik pasien. Kombinasi metformin dan sulfonilurea merupakan terapi kombinasi yang banyak digunakan, namun efek samping hipoglikemia meningkatkan penggunaan kombinasi metformin dan vildagliptin sebagai alternatif.

**Tujuan:** Mengevaluasi pola penggunaan obat, kepatuhan dan biaya obat pasien DM tipe 2 dengan terapi kombinasi metformin dan vildagliptin dibandingkan kombinasi metformin dan sulfonilurea.

**Metode:** Penelitian retrospektif dengan desain *cross-sectional* menggunakan data klaim pembiayaan obat sebuah perusahaan di Indonesia periode Januari-Juni 2019. Subyek yaitu pasien DM tipe 2 yang menggunakan kombinasi metformin dan vildagliptin atau metformin dan sulfonilurea. Pola penggunaan obat dianalisis secara deskriptif berdasarkan sistem *Anatomical Therapeutic Chemical (ATC)* Kepatuhan dinilai berdasarkan nilai *Medication Possession Rate (MPR)*  $MPR \geq 0,8$  selama enam bulan. Biaya obat dihitung per pasien.

**Hasil:** Pola penggunaan obat anti diabetes yang paling tinggi yaitu sediaan tunggal metformin (24,8%) dan glimepiride (24%). Pola penggunaan obat selain anti diabetes didominasi oleh obat dislipidemia atorvastatin (9,91%) dan obat antihipertensi amlodipine (9,2%). Persentase penggunaan obat generik hanya 8,0% dan kesesuaian dengan Formularium Nasional mencapai 64,4%. Kepatuhan pada pemberian terapi ( $MPR \geq 0,8$ ) kelompok metformin dan vildagliptin lebih rendah dengan OR 0,14 (CI 95% = 0,09-0,22) kali lebih besar dibanding metformin dan sulfonilurea. Rerata biaya obat per pasien metformin dan vildagliptin lebih tinggi dibandingkan metformin dan sulfonilurea ( $p < 0,05$ ; CI 95%).

**Kesimpulan:** Metformin dan glimepiride adalah obat anti diabetes yang paling banyak diresepkan pada periode Januari-Juni 2019. Persentase pasien DM tipe 2 yang patuh pada pengobatan lebih rendah dibanding metformin dan sulfonilurea. Biaya obat lebih tinggi pada kelompok pasien metformin dan vildagliptin dibandingkan metformin dan sulfonilurea.

**Kata kunci:** Diabetes melitus tipe 2, pola penggunaan obat, anti diabetes, metformin, sulfonilurea, vildagliptin, *medication possession rate (MPR)*, kepatuhan pengobatan, biaya obat.

## ABSTRACT

**Background:** Diabetes Mellitus (DM type 2) is a progressive chronic disease with sufferers and drug costs that continue to increase every year. The choice of oral antidiabetic therapy and the patient's adherence to therapy become important factors in the patient's glycemic control. The combination of metformin and sulfonylureas is a widely used combination therapy, but the side effects of hypoglycemia increase the use of a combination of metformin and vildagliptin as an alternative.

**Objective:** Evaluate drug use patterns, adherence, and drug cost of type 2 DM patients with metformin and vildagliptin combination therapy versus combination metformin and sulfonylureas.

**Method:** Retrospective study with cross-sectional design using drug financing claim data of a company in Indonesia for the January-June 2019 period. The subjects were type 2 DM patients who took a combination of metformin and vildagliptin or metformin and sulfonylureas. Drug use patterns were analyzed descriptively based on the Anatomical Therapeutic Chemical (ATC) system. Adherence was assessed based on the MPR Medication Possession Rate (MPR) value of  $\geq 0.8$  for six months. The cost of the drug is calculated per patient.

**Results:** The highest pattern of antidiabetic drug use was single preparations of metformin (24.8%) and glimepiride (24%). The pattern of use of drugs other than antidiabetics was dominated by the dyslipidemia drug atorvastatin (9.91%) and the antihypertensive drug amlodipine (9.2%). The percentage of generic drug use is only 8.0% and compliance with the National Formulary reaches 64.4%. Adherence to therapy ( $MPR \geq 0.8$ ) of the metformin and vildagliptin groups was lower with an OR of 0.14 (95% CI = 0.09-0.22) times greater than metformin and sulfonylureas. The average drug cost per patient of metformin and vildagliptin was higher than that of metformin and sulfonylureas ( $p < 0.05$ ; CI 95%).

**Bottom Line:** For 6 months, metformin and glimepiride were the most widely prescribed antidiabetic drugs. The percentage of type 2 DM patients who are adherent to treatment is lower than metformin and sulfonylureas. The cost of the drug was higher in the metformin and vildagliptin patient groups than in metformin and sulfonylureas.

**Keywords:** Type 2 diabetes mellitus, drug use pattern, antidiabetic, metformin, sulfonylureas, vildagliptin, medication possession rate (MPR), medication adherence, drug cost.