

Abstract

Analysis of drug utilization of antidiabetics

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Introduction and objective: Effects of antidiabetics prevent serious consequences on mortality, morbidity and quality of life of patients. The objective of practical part of this thesis was to analyze trends of antidiabetics utilization in the Czech Republic between 2005–2021.

Methods: The utilization of antidiabetics was analysed in the period from 1st January 2005 to 31st December 2021. The data were obtained from the State Institute for Drug Control database, where are collected reports from distributors regarding the supplies to healthcare institutions including pharmacies, vendors of selected pharmaceuticals and veterinarians. The denominator was number of inhabitants in Czech Republic in particular years in study period. The drug utilization of antidiabetics in Defined Daily Doses (DDD) was converted to Defined Daily Dose/1000 inhabitants/day (DID). The values of DDD of medicaments in fixed combinations were also converted to DID but not converted to their single components. The descriptive statistics was used to analyze the data.

Results: The total utilization of analysed antidiabetics increased from 52.72 DID to 99.38 DID during the study period. The utilization of metformin increased from 11.78 DID to 31.07 DID. The utilization of sulfonylurea derivatives (DSU) decreased from 24.74 DID to 18.29 DID. The utilization of dipeptidyl peptidase-4 inhibitors (DPP-4i) increased from initial value 0.1 DID in 2008 to 7.49 DID in 2021. The utilization of analogues of glucagon-like peptide-1 increased from 0,000021 DID in 2007 to 2.51 DID in 2021. The utilization of gliflozins increased from 0.13 DID in 2014 to 2.75 DID in 2021. The utilization of insulins moderately increased from 14.47 DID to 22.92 DID. Concerning the group of antidiabetics, the most frequently utilized was metformin, followed by insulins, DSU and DPP-4i.

Conclusion: The objective of the thesis was fulfilled completely. This thesis summarizes valuable information regarding trends in utilization of antidiabetics in Czech Republic for 17 years period of their use.

Keywords: diabetes mellitus, drug utilization, antidiabetics