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STUDYING THE QUALITY OF LIFE IN ELDERLY PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Abstract

Numerous studies have found that older people often suffer from type 2 diabetes mellitus (DM), which significantly reduces their quality of life (QoL).[1,2,3] Therefore, it is important to search for a pharmacotherapy regimen that improves the quality of life of elderly patients. Diabetes mellitus (DM) is recognized as an important cause of premature death and disability. [11,12] Over the past three decades, the age-standardized prevalence of the disease has increased significantly in different countries, regardless of income level.[13,14,15] According to experts, up to 40% of this increase is due to population growth and aging [4,5]. Diabetes mellitus is one of the most common health problems in older adults, who are a heterogeneous and complex population. as it includes newly diagnosed elderly patients with diabetes and patients with a long history of the disease with onset in middle or young age. [6,7,8,9] This makes diabetes management challenging for clinicians due to difficulties in individualizing glycemic goals, treatment strategies, comorbidities, polypharmacy, and the risk of developing hypoglycemic conditions.[16,17,18,19]

Keywords:

Type 2 Diabetes mellitus, гликированный гемоглобин, population, comorbidities, hypoglycemic condition, pharmacoeconomically.

The purpose of the study was to identify the most pharmacoeconomically effective treatment regimen for type 2 diabetes based on studying the quality of life of elderly patients. Objectives of the study: 1) retrospective analysis of medical records and prescription sheets for inpatients with type 2 diabetes; 2) ATC/DDD methodology of oral hypoglycemic drugs and combined pharmacotherapy regimens; 3) study of the level of quality of life of patients with type 2 diabetes; 4) determination of cost per unit of effectiveness (QALYs); 5) conducting sensitivity analysis.

Materials and methods

320 medical records and prescription sheets for inpatients with type 2 diabetes aged 60 years and older who were treated at the Republican Scientific and Practical Center for Emergency Medicine of the Samarkand regional branch in the period 2021-2022; data from the statistical department. Retrospective analysis; ATC/DDD methodology; visual analogue scale (VAS) of the adapted European quality of life questionnaire EuroQoL-5D; cost-effectiveness analysis; sensitivity analysis.

Research results

It was found that for the treatment of type 2 diabetes in elderly patients, combination therapy is used in 66% of cases: metformin + glimepiride (45% of prescriptions), metformin + gliclazide (15%) and metformin + glibenclamide (6%). Based on the ATC/DDD methodology, it was established that the cost of average daily doses (DDD) in the context of the minimum and maximum prices of generics was: for the regimen metformin + glimepiride 35 thousand soums, metformin + gliclazide 52 thousand soums, metformin + glibenclamide 61 thousand soums. To calculate QALYs, the following formula was used: C = D S F, where C is the number of years of quality life, D is the years of life to come, and F is the level of quality of life (according to YOUR). According to VAS data, it was determined that the level of quality of life of patients with type 2 diabetes who took the metformin + glibenclamide regimen was 0.58 ± 0.02; metformin + glimepiride ñ 0.69 ± 0.02; metformin + gliclazide – 0.65 ± 0.02. It was found that when using the metformin + glibenclamide regimen, patients received 6.77 ± 0.66 QALYs; metformin + glimepiride 9.76 ± 0.74 QALYs, metformin + gliclazide 8.66 ± 0.64 QALYs. It was determined that the metformin + glibenclamide regimen had the cheapest cost per unit of effectiveness (1 QALY), in terms of the cost of generics, compared to the metformin + glimepiride and metformin + gliclazide regimens. Sensitivity analysis showed that the metformin + glibenclamide regimen retains pharmacoeconomic advantages over the metformin + glimepiride regimen while increasing the cost of DDD to 40% and to 14% for metformin + gliclazide. in terms of the cost of generics, the metformin + glibenclamide regimen had compared to the metformin + glimepiride and metformin + gliclazide regimens. Sensitivity analysis showed that the metformin + glibenclamide regimen retains pharmacoeconomic advantages over the metformin + glimepiride regimen while increasing the cost of DDD to 40% and to 14% for metformin + gliclazide. in terms of the cost of generics, the metformin + glibenclamide regimen had compared to the metformin + glimepiride and metformin + gliclazide regimens. Sensitivity analysis showed that the metformin + glibenclamide regimen retains pharmacoeconomic advantages over the metformin + glimepiride regimen while increasing the cost of DDD to 40% and to 14% for metformin + gliclazide.

Conclusion

The metformin + glibenclamide regimen had the cheapest cost per unit of effectiveness in elderly patients. The lower the price, the more convenient it is for patients who receive long-term combination forms of hypoglycemic drugs. Sensitivity analysis confirmed the robustness of the results obtained.

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