

DOI: 10.26693/jmbs06.06.148

UDC 616.12–008.331.1–085

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COMPARATIVE PHARMACOTHERAPY OF HYPERTENSION

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The purpose of the study. This study aims to review the practice of the utilization of antihypertensive drugs of various pharmacological groups within the condition of the therapeutic hospital in Ukrainian and Egyptian patients, adherence to treatment in patients with hypertension in Ukraine and Egypt.

Materials and methods. A study of 120 patients who were treated for hypertension II stage in a therapeutic hospital in Ternopil and Cairo was conducted. All subjects completed a questionnaire that included personal, socio-demographic, and medical data. The number and type of hypotensive drugs or drug combinations were analyzed.

Results and discussion. Regarding the pharmacotherapy of hypertension the use of β -blockers among Ukrainian participants did not differ from Egyptian. The use of calcium channel antagonists was a little bit higher among Egyptians than Ukrainians. Diuretics were used more often by Ukrainians than by Egyptians. The use of ACEI/ARBs surpassed the use of all other classes of antihypertensives among both groups. Whereas the ACEI/ARBs use among Egyptians was lower than Ukrainians. In this study we conducted a determination of compliance which was defined as an act of adhering to the regimen of care recommended by the clinician and persisting with it over time. The majority of Ukrainian and Egyptian patients with hypertension do not always perform the doctor's prescription. The reason for the unfull implementation of medical prescriptions with the same frequency was called deficiency of funds and forgetfulness. Near 80% of Ukrainian respondents are ready to complete the prescription with understanding, however, 14% of the patients stated that they were not always ready to fulfill the prescription, and the smallest part of patients did not think it was necessary to follow the regularity of treatment and treatment regimen. We noted no significant difference in the adherence to antihypertensive therapy between Ukrainian and Egyptian participants.

Early discontinuation of treatment and suboptimal daily use of the prescribed regimens are the foremost common facets of poor adherence to treatment as well as non-adherence to antihypertensive therapy correlates with a better risk of cardiovascular events.

Conclusion. ACEI/ARBs are the most commonly used group of antihypertensive drugs among Ukrainian and Egyptian patients. The majority of Ukrainian and Egyptian participants with hypertension do not always

perform the doctor's prescription. Only 50% had an objective reason for insufficient compliance.

Keywords: hypertension, antihypertensive drugs, pharmacotherapy, treatment regimen, compliance.

Introduction. Hypertension (HTN) is one of the foremost preventable causes of premature morbidity and mortality worldwide. The diagnosis, treatment, and follow-up of patients with hypertension are one of the most common interventions in primary care, accounting for approximately 12% of primary care consultation episodes and approximately £1 billion in drug costs [1, 2].

Hypertension is a common chronic disease amenable to regulate by appropriate medication or adopting relevant lifestyle modifications. The medication treatment of HTN is established on exceptionally strong prove, supported by the most important number of outcomebased RCTs in clinical pharmaceuticals. Meta-analyses of RCTs counting a couple of hundred thousand patients have appeared that a 10 mmHg decrease in systolic BP or a 5 mmHg decrease in diastolic BP is said with noteworthy diminishments altogether major CV events by 20%, all-cause mortality by 10-5%, stroke by 35%, coronary events by 20%, and coronary failure by 40% [3-6]. But early discontinuation of treatment and suboptimal daily use of the prescribed regimens are the foremost common facets of poor adherence to treatment as well as non-adherence to antihypertensive therapy correlates with a better risk of CV events [7]. Low adherence to the prescribed medications can affect near 50% of patients with apparently resistant hypertension, which poor adherence is strongly and inversely correlated with the number of pills prescribed. Early recognition of a scarcity of adherence might reduce the number of costly investigations and procedures (including interventional treatment), and avoid the prescription of unnecessary drugs [7, 8].

The purpose of the study. This study aims to review the practice of the utilization of antihypertensive drugs of various pharmacological groups within the condition of the therapeutic hospital in Ukrainian and Egyptian patients, adherence to treatment in patients with HTN in Ukraine and Egypt.

Materials and methods. This study was conducted on 60 patients attending hospital in Egypt for HTN management. The analysis of 60 cases of

hospital patients, who were treated in the Ternopil clinical 3rd hospital with a diagnosis of Hypertension disease was performed. Patients were homogeneous in age, stage of disease (Hypertension disease II stage) and duration of illness (8.7 ± 2.6 years). Hypertension diagnostics was performed according to 2020 International Society of Hypertension Global Hypertension Practice Guidelines [8]. The study protocol conformed to the ethical guidelines of Helsinki's Declaration and was approved by the Bioethics Commission of I. Horbachevsky Ternopil State Medical University (Protocol 24, dated 27.08.2014). Each study patient signed an informed consent to participate in the study and all measures to ensure anonymity of patients were taken.

All subjects completed a questionnaire that included personal, socio-demographic, and medical data. The number and type of hypotensive drugs or drug combinations were analyzed. The socio-demographic profile of Egyptian participants shows that the mean age was 57.3 ± 9.8 years. Considering gender 56.7% of the participants were females, while 43.3% were males. Among Ukrainian participants, there were 53.3% of male and 46.7% of female. The mean age was 59.4 ± 8.8 years.

The present study possesses the characteristics of an observational, retrospective research, performance based on the information obtained by analyzing the observation sheets of patients diagnosed with HTN. Descriptive results were expressed as frequency, percentage, and mean \pm SD.

Results and discussion. The most important aspect of the pharmacological treatment of HTN is the achievement and maintenance of optimal BP numbers which requires long-term and regular administration of drugs. The proportion of Ukrainian patients treated with ACEI/ARBs was 75.1%, β -blockers – 25%, the number of patients receiving diuretics was 48.4%, calcium channel blockers – 26.7%, drug combinations – 31.3%. Regarding the pharmacotherapy of HTN in Egyptian patients, 32% of Egyptians were treated with diuretics; β -blockers, calcium channel blockers and ACEI/ARBs were used in 25%, 33%, 53%, respectively; taking 3 or more of the above classes of drugs – 14%.

The use of β -blockers among Ukrainian participants did not differ from Egyptian. The use of calcium channel antagonists was a little bit higher among Egyptians than Ukrainians. Diuretics were used more often by Ukrainians than by Egyptians. The use of ACEI/ARBs surpassed the use of all other classes of antihypertensives among both groups. Whereas the ACEI/ARBs use among Egyptians was lower than among Ukrainians.

In this study we conducted a determination of compliance which was defined as an act of adhering to the regimen of care recommended by the clinician and persisting with it over time.

The majority of Ukrainian patients with HTN do not always perform the doctor's prescription. The reason for the unfull implementation of medical prescriptions with the same frequency was called deficiency of funds and forgetfulness. Near 80% of respondents are ready to complete the prescription with understanding, however, 14% of the patients stated that they were not always ready to fulfill the prescription, and the smallest part did not think it was necessary to follow the regularity of treatment and treatment regimen. Although all 100% of those respondents wanted the most modern treatment for hypertension, in almost half of the cases, they asked for cheaper medications. At this point of the analysis of adults with HTN, we noted no significant difference in the adherence to antihypertensive therapy between Ukrainian and Egyptian participants.

There is a possibility of reducing blood pressure to optimal rates in most patients with hypertension, which requires long-term and regular administration of drugs. Current ECS guidelines suggest there is no evidence that the BP response to treatment in ethnic groups differs significantly from that reported in the general population in Europe [5]. Hypertensive black patients show a reduced antihypertensive response to RAS-blocker monotherapy, whereas they usually respond more effectively to thiazide or thiazide-like diuretics and CCBs, which in black patients may be combined with each other or with a RAS blocker, making the latter more effective [5, 9]. There is growing evidence that poor adherence to treatment – in addition to physician inertia – is the foremost important explanation for poor BP control and risk of CV events [7]. Consequently today we are talking about a “low pandemic adherence to treatment” [7, 10], and this factor can offset all efforts of doctors prescribing rational therapy. Patients with low adherence to AHT are those patients who do not attach much importance to their HTN, not fully understanding the threats of this disease, who, when well-being, refuse to take the drugs. Special technologies for improving medical literacy are needed, including outreach by counselors to improve patients' adherence to treatment.

Conclusion. ACEI/ARBs are the most commonly used group of antihypertensive drugs among Ukrainian and Egyptian patients (the frequency of use by the Egyptians was lower). The majority of Ukrainian and Egyptian participants with HTN do not always perform the doctor's prescription. Only 50% had an objective reason for insufficient compliance. Improving adherence could have significant public health implications and could improve outcomes specific to hypertension.

Perspectives of further research. Assess the control of hypertension in patients, including adherence to antihypertensive therapy for 6 and 12 months of outpatient care.

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УДК 616.12–008.331.1–085

СРАВНИТЕЛЬНАЯ ФАРМАКОТЕРАПИЯ ГИПЕРТОНИЧЕСКОЙ БОЛЕЗНИ

Мерецкий В. Н., Мерецкая И. В.

Резюме. Цель работы – проанализировать практику применения антигипертензивных препаратов различных фармакологических групп в условиях терапевтического стационара у пациентов в Украине и Египте, приверженность к лечению у пациентов с гипертензией.

Материал и методы. Проведено исследование 120 пациентов, находившихся на лечении по поводу гипертонической болезни в терапевтическом стационаре больниц Тернополя и Каира. Все больные были проанализированы в зависимости от длительности применения гипотензивной терапии, спектра фармакологических групп антигипертензивных лекарственных средств и соблюдения режима фармакотерапии.

Результаты. Частота применения β -адреноблокаторов при лечении гипертензии среди украинских пациентов не отличалась от такой у пациентов из Египта. При лечении египтян антагонисты кальциевых каналов использовались несколько чаще, чем украинцев. Диуретики чаще использовали украинские больные, чем египтяне. Применение ингибиторов ангиотензинпревращающего фермента / блокаторов рецепторов ангиотензина превзошло использование всех других классов антигипертензивных средств в обеих группах обследованных пациентов.

В данном исследовании проанализирована приверженность лечению в обеспечении эффективного контроля артериальной гипертензии, которая определялась как прием препаратов согласно назначения врача в течение соответствующего срока. Около 80% как украинских, так и египетских респондентов с пониманием отнеслись к необходимости регулярного лечения и готовности следовать схеме, назначенной врачом. Однако большинство пациентов из обеих стран не всегда придерживались назначенной фармакотерапии.

Вывод. ИАПФ/БРА – группа антигипертензивных препаратов, которая наиболее часто применялась обследованными пациентами. Большинство больных обеих стран не всегда придерживались рекомендованных схем терапии. Важным резервом повышения эффективности лечения артериальной гипертензии является улучшение приверженности терапии, особенно в условиях необходимости длительного приема препаратов.

Ключевые слова: гипертония, антигипертензивные препараты, фармакотерапия, режим, приверженность лечению.

УДК 616.12–008.331.1–085

ПОРІВНЯЛЬНА ФАРМАКОТЕРАПІЯ ГІПЕРТОНІЧНОЇ ХВОРОБИ

Мерецький В. М., Мерецька І. В.

Резюме. *Мета роботи* – проаналізувати практику застосування антигіпертензивних препаратів різних фармакологічних груп в умовах терапевтичного стаціонару у пацієнтів в Україні та Єгипті, прихильність до лікування у пацієнтів з гіпертонією.

Матеріал та методи. Проведено дослідження 120 пацієнтів, які знаходились на лікуванні з приводу гіпертонічної хвороби у терапевтичних відділеннях лікарень Тернополя та Каїру. Усі хворі були проаналізовані щодо тривалості застосування гіпотензивної терапії, спектру фармакологічних груп антигіпертензивних лікарських засобів та дотримання режиму фармакотерапії.

Результати. Частота застосування β-адреноблокаторів при лікуванні гіпертонії серед українських пацієнтів не відрізнялася від пацієнтів з Єгипту. Серед єгиптян використання антагоністів кальцієвих каналів було дещо частішим, ніж в українців. Діуретики частіше використовували українські хворі, ніж єгиптяни. Застосування інгібіторів ангіотензинперетворюючого ферменту/блокаторів рецептора до ангіотензину перевершило використання всіх інших класів антигіпертензивних засобів серед обох груп обстежених пацієнтів.

У даному дослідженні проаналізована прихильність до лікування у забезпеченні ефективного контролю артеріальної гіпертензії, яка визначалась як прийом препаратів згідно з призначенням лікаря протягом відповідного терміну. З розумінням до необхідності регулярного лікування та готовності дотримуватися схеми, призначеної лікарем, поставилися близько 80% як українських, так і єгипетських респондентів. Проте більшість пацієнтів з обох країн не завжди дотримувались призначеної фармакотерапії.

Висновок. ІАПФ/БРА – групи антигіпертензивних препаратів, що найбільш часто застосовувалися обстеженими пацієнтами. Більшість хворих обох країн не завжди дотримувались рекомендованих схем терапії. Важливим резервом підвищення ефективності лікування артеріальної гіпертензії є покращення прихильності до терапії, особливо в умовах необхідності тривалого прийому препаратів.

Ключові слова: гіпертонія, антигіпертензивні препарати, фармакотерапія, режим, прихильність до лікування.

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The authors of this study confirm that the research and publication of the results were not associated with any conflicts regarding commercial or financial relations, relations with organizations and/or individuals who may have been related to the study, and interrelations of coauthors of the article.

Стаття надійшла 08.10.2021 р.

Рекомендована до друку на засіданні редакційної колегії після рецензування