ОЦЕНКА РИСКОВ ПРИМЕНЕНИЯ ЛЕКАРСТВ У ПОЖИЛЫХ ЛЮДЕЙ

Мунх-Эрдэнэ Д.[1] Баярмаа Н.[2], Зээнямбуу Ч.[3], Отгонтогоо О.[4]

[1]Мунх-Эрдэнэ Дашзэвэг - кандидат образовательных наук,
кафедра фармацевтический,
Дарханская медицинская школа;
[2]Баярмаа Нацаг - магистр образовательных наук,
кафедра фундаментальных наук;
[3]Зээнямбуу Чойндон - кандидат образовательных наук,
Монгольский академический университет
[4]Отгонтогоо Ойдовсурэн - кандидат фармацевтических наук,
отдел исследований и информационных технологий
Монгольский национальный университет медицинских наук,
г. Дархан - Уул, Монголия

Аннотация: *доля населения в возрасте 60 лет и старше в общей численности населения Монголии составляла 6,4 процента в 2015 году. Ожидается, что к 2030 году она составит 11,9 процента, а к 2050 году — 21,1 процента.*

Пожилые люди подвержены более высокому риску хронических заболеваний и дисфункции органов, чем другие группы, принимают несколько препаратов одновременно, и у них выше вероятность возникновения побочных эффектов и ошибок в приеме лекарств. В этом исследовании оценивается рациональное использование лекарств среди пожилые люди для улучшения благополучия. Цель: оценить риск употребления наркотиков среди взрослых пожилых людей в сомоне Дархан, провинция Дархан-Уул. Материалы и методология исследования: Пожилые люди в сомоне Дархан были случайным образом отобраны с помощью опросника риска употребления наркотиков, разработанного Американским обществом старения. Исследование было разработано с использованием программного обеспечения SPSS 23. Результаты: всего было случайным образом отобрано 99 пожилых людей из сомона Дархан, аймака Дархан-Уул. Средний возраст 67,5 ± 6,2 года. Участники опроса ответили следующим образом: 31,3% принимают пять или более рецептурных препаратов каждый день, 18,8% не знают назначение или показания своего препарата, 21,9% иногда нарушают режим приема лекарств, 21,9% принимают препарат из-за 3 или более заболеваний, 35,4% получали рецептурные препараты более чем в одной аптеке. Заключение: оценка риска употребления лекарств у пожилые пациентов составляет 17,7%. Хотя это низкий процент, пожилые люди с сопутствующими заболеваниями принимают в среднем 5 или более лекарств в день.

Ключевые слова: *опросник риска приема лекарств, полифармация, пожилые люди, аптека, режим приема лекарств.*

ASSESSING THE RISKS OF MEDICATION USE IN THE ELDERLY

Munkh-Erdene D.[1], Bayarmaa N.[2], Zeenaymbuu Ch.[3], Otgontogoo O.[4]

[1]Munkh-Erdene Dashzeveg - Candidate of Educational Sciences,
DEPARTMENT OF PHARMACY,
DARKHAN-UUL MEDICAL SCHOOL;
[2]Bayarmaa Natsag - Master of Educational Sciences,
DEPARTMENT OF FUNDAMENTAL SCIENCES;
[3]Zeenaymbuu Choindon - Candidate of Educational Sciences,
GRADUATE UNIVERSITY OF MONGOLIA;
[4]Otgontogoo Oidovsuren- Candidate of Pharmacy Sciences,
DEPARTMENT OF RESEARCH AND INFORMATION TECHNOLOGY,
MONGOLIAN NATIONAL UNIVERSITY OF MEDICAL SCIENCES,
DARKHAN-UUL, MONGOLIA

Abstract: *The share of the population aged 60 years and over in the total population in Mongolia was 6.4 percent in 2015. It is expected 11.9 percent by 2030, and 21.1 percent by 2050.*

Geriatric patient experiences higher risk of chronic disease and organ dysfunction than other groups, take multiple drugs at the same time and they are more likely to experience side effects and drug medication errors. This study is assessed the rational use of drugs among the geriatrics patient to enhance wellbeing. Purpose: To assess the risk of drug use among the adult older in Darkhan soum, Darkhan-Uul province. Research Materials and methodology: Elderly people in Darkhan soum were randomly selected using a Risk of Medication Questionnaire developed by the American Society of Aging. The research was developed using SPSS 23 software. Results: Total 99 elderly people from Darkhan soum, Darkhan-Uul province were randomly selected. The average age was 67.5 ± 6.2. The survey participants responded follows: 31,3% take five or more prescription

medications each day, 18.8% do not know the purpose or indication of their medication, 21.9% sometimes violate the medication regimen, 21.9% take the medication due to 3 or more diseases, 35.4% got prescription medications from more than one pharmacy. Conclusion: The risk assessment of medication use in the geriatric patient is 17.7%. Although this is low percentage, the elderly with underlying conditions take an average of five or more medications per day.
Keywords: *Risk of Medication Questionnaire, poly-pharmacy, the elderly, pharmacy, medication regimen.*

Introduction:

The share of the population aged 60 years and over in the total population in Mongolia was 6.4 percent in 2015. It is expected 11.9 percent by 2030, and 21.1 percent by 2050.

Demographic transition in the elderly population constitutes a significant challenge for health authorities worldwide as with advancing age multiple chronic diseases such as hypertension, diabetes mellitus, arthritis, chronic heart disease, renal diseases, etc. are associated. As a result of which elderly people tend to take multiple medications in a day that can be referred to as poly-pharmacy.

Various studies globally have shown that on an average 2-9 medications per day are taken by the elderly people. The prevalence of inappropriate medication used by the elderly people was found to be from 11.5-62.5%. Poly-pharmacy can lead to ADRs, mostly due to over-the-counter medications. To reduce the incidence and adverse effects of poly-pharmacy medication regimes of elderly patients should be evaluated monthly. Therefore, this study is required to identify the risks of drug use in the elderly.

The purpose of the research work

To assess the risk of drug use among the adult older in Darkhan soum, Darkhan-Uul province.

Materials and methods

Study design and population

The survey was conducted using the model of Descriptive Statistics and Cross-Sectional Study from March to September 2021. The 99 elderly over 55 years has participated in the survey.

Data collection form

The data collection form consisted of two sections. The first section included questions to retrieve information about geriatrics' demographic characteristics (age, gender, education level, residence area). The second section retrieved information about the geriatrics' medication use regime and medication use risks.

Statistical analysis

Data were analyzed using the Statistical Package for Social Sciences (IBM SPSS Statistics for Windows, version 23, Armonk, NY: IBM Corp). The results were presented as percentages (95% confidence intervals; CI), means (standard deviation-SD), medians and range.

Results

1. Total 99 elderly people from Darkhan soum, Darkhan-Uul aimag were randomly selected. The results of the survey are shown in the table.

Characteristics		**Results n/(%)**
Age /by year/		67.5±6.2
Gender	Male	33(33.3)
	Female	66(66.7)
Education background	Pre-diploma	34(34.3)
	Diploma in special education	41(41.4)
	Bachelor and Master degree	24(24.2)
Source of income	Salary	2(2)
	Retirement	90(90.9)
	Salary, Retirement	6(6.1)
	No income	1(1)
Employment	Freelance	6(6.1)
	Executive officer	1(1)
	Consultant	1(1)
	full-time employee	5(5.1)
	Other	7(7.1)
	Unemployed	79(79.8)
Monthly income	Minimum monthly wage	100000
	Maximum	1450000
	Average income	442958.76±160398

Marital status	Married	57(57.6)
	Single/ Widowed	42(42.4)

2. We conducted a questionnaire with 24-question on the drug use regimen for the elderly. Eight of these questionnaires were rated at 30 percent or more.

№	Questionnaires	No n/(%)	Seldom n/(%)	Usually n/(%)
1	An Instructions for Use (IFU) was complicated the patients did not take the medication as instructed.	69(69.7)	29(29.3)	1(1)
2	To save money, they do not take medications as prescribed by a doctor they take less than the prescribed dose.	65(65.7)	32(32.3)	2(2)
3	Concerns about the interaction of the drugs they take to reduce the instructions for use of the drug.	67(67.7)	31(31.3)	1(1)
4	Because the drug was unnecessary, they take it less than they were supposed to.	70(70.7)	26(26.3)	3(3)
5	Sometimes they forget to take their pills.	67(67.7)	28(28.3)	4(4)
6	Sometimes they can make medical decisions for themselves what medicine to take. .	68(68.7)	26(26.3)	5(5)
7	Sometimes they take painkillers, sedatives, anxiety medications, and sleeping pills when they are not needed.	67(67.7)	32(32.3)	0(0)
8	They need a lot of medication and see a doctor several times.	64(64.6)	29(29.3)	6(6.1)

In the study of drug use regimens in the elderly, it was 17-35.4%. Which of these, 35 (35.4) were more likely to seek medical treatment and 34 (34.3) were less likely to save money and use lower doses than prescribed. This indicates that the drug regimen is violated.

3. The survey participants responded follows: 31,3% take five or more prescription drugs each day, 18.8% do not know the purpose or indication of their drug, 21.9% sometimes violate the medication regimen, 21.9% take the drug due to 3 or more diseases, 35.4% got prescription drugs from more than one pharmacy.

Discussion

This study is the beginning of the study on the rational use of drugs by the elderly in Darkhan-Uul province. The general indicators of the study, such as age, sex, education, employment, salary, and retirement, are in line with the results of the research conducted by researcher R.Oyunkhand on the prevalence of diseases, mental and public health among the elderly in Mongolia.

In Thailand 60 or over increase to 16% of total population. Older patients usually present with multiple comorbidities related to advanced age, resulting in increased demand for medications. Furthermore, other risk factors of polyepharmacy are age, education, the frequency of health care services and easily approachable medication. The prevalence of polyepharmacy in Thailand has varied, ranging from 29% to 75%. Polypharmacy has negative impact on the elderly such as drug-drug interactions, drug-disease interactions, adverse drug reactions and events, duplicated drugs, noneadherence, morbidity as well as mortality. The strategies of pharmacological treatment in the elderly are consideration of risks and benefits of regimens, adjustment of doses for renal and hepatic impairment as well as start with a low dose and slow titration [Ruangritchankul, S., 2018].

According to our study, the risk of drug use was more than 30 percent in 8 indicators, and the risk of drug use was 17.7%. In the future, we will assess the risk of drug use in the elderly using the Birs test and the MAI test.

Conclusion

- The risk assessment of medication use in the geriatric patient is 17.7%. Although this is low percentage, the elderly with underlying conditions take an average of 5 or more medications per day.

Список литературы / Reference

1. *Batkhuyag P.* (Ed.). Fundamentals of clinical medicine. 2000.
2. Health of the Elderly. Curriculum Guide. UB., 2015.
3. Healthy Aging and Elderly Health. National Program. 2013.,
4. *Oyunkhand R.* The prevalence of diseases, mental and social health of the elderly in Mongolia. Thesis for the degree of Doctor of Medicine. UB., 2011.
5. Tseregmaa.Ts. (Ed.). Basics of gerontology and geriatrics.2005.
6. WHO, WORLD REPORT ON AGEING AND HEALTH. 2015
7. [Electronic Resource]. URL:https://www.helpage.org/global-agewatch/population-ageing-data/country-ageing-data/?country=Mongolia
8. [Electronic Resource]. URL: https://www.legalinfo.mn/law/details/12453.
9. [Electronic Resource]. URL: https://www.1212.mn/

10. [Electronic Resource]. URL: https://www.legalinfo.mn/annex/details/6115?lawid=9608.
1. [Electronic Resource]. URL: https://www.researchgate.net/publication/221925605_