

Rational drug use in elderly patients in a primary care center

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Abstract

Objective: To evaluate rational drug usage of elderly patients at a primary care centre.

Method: The cross-sectional study was conducted at Tokat Sulularay Central Family Health Centre, Turkey, from 1st January to 30th June, 2018, and comprised patients aged >65 years. Data was collected using a pre-designed questionnaire evaluating medicine usage habits. Data was analysed using SPSS 20.

Results: Of the 291 patients, 164(56.4%) were females. The overall mean age was 72.76±7.126 years (range: 65-96 years). Leftover drug-keeping habit was found in 155(53.3%) subjects, and 177(60.8%) did not use unprescribed drugs.

Conclusions: The drug usage habits of the elderly were not found to be rational, as more than half the subjects had leftover drugs at home.

Keywords: Aging, Drug therapy, Drug misuse, Self-medication. (JPMA 71: 1353; 2021)

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Introduction

Rational drug use was defined by the World Health Organisation (WHO) at its 1985 meeting as "the ability of individuals to be able to easily procure the drug suitable for the clinical findings and individual characteristics in a suitable time and dosage at the lowest price".¹ Although it is seen as a problem mostly faced by developing countries and can be related to all phases related to manufacturing, procurement, storage and usage of drugs, the fact is that irrational drug usage is an important health problem for all countries.^{2,3}

Aging is defined as the gradual loss of physiological functions over time. It is a complex and heterogeneous process, as it can vary significantly between cells and tissues in the same organism.⁴ In the last century, a significant increase has been observed globally in elderly population which is also called population aging.^{5,6} A rapid increase has also been observed in the prevalence of chronic diseases through the effect of increasing life expectancy and changing socio-environmental factors.⁷⁻⁹ This causes greater need for health services.^{10,11} With increasing age, a decrease is observed in bodily functions, such as the absorption of drugs through the body, dispersion through the body, and discharge metabolism through the kidneys and liver.^{6,12} Multidrug use is observed due to different causes, such as chronic diseases.¹³

Multidrug use is called polypharmacy. Although there is

no clear definition for polypharmacy, it is generally related to the number of drugs being used or misused.^{14,15} Studies have in general described polypharmacy as co-usage of five or more drugs.^{14,16} Polypharmacy in the elderly is directly related to irrational drug usage based on decreasing physiological functions or using a large amount or number of drugs.^{6,17} Other than patient or age-related causes, health service presentation and prescription by health service providers can also cause multi-drug and irrational usage.¹⁸ The quality of doctor-patient communication has an impact on the drug usage behaviour of the patient.¹⁹ Long-term and regular drug use is possible with the support of healthcare professionals.²⁰ There are not enough studies exploring whether or not most drugs used for medical treatment in old age are safe.²¹

The current study was planned to reveal the drug usage habits of the elderly, the factors affecting these habits, and the association, if any, between the two.

Subjects and Methods

The cross-sectional descriptive study was conducted at Tokat Sulularay Central Family Health Centre, Turkey, from 1st January to 30th June, 2018. Permission was obtained from the Tokat Public Health Directorate, while approval was obtained from the ethics review board of Ondokuz Mayıs University, Samsun, Turkey. All patients aged >65 years were included. Only those who did not wish to participate were excluded. Approximately 1,900 people aged 65 are registered with the facility. Power analysis was performed according to the sample size calculation formula of Akturk and Acemoglu.²² 95% confidence interval and 5% margin of error were

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considered in the calculation. As a result of the power analysis of 1900 elderly patients, the minimum sample size was calculated as 275 persons. The study was conducted with 291 people.

After taking informed consent from the subjects, data was collected using a pre-designed questionnaire.

Data was analysed using SPSS 20.

Results

Of the 291 patients, 164(56.4%) were females and 127(43.6%) were males. The overall mean age was 72.76 ± 7.126 years (range: 65-96 years). Most of the participants 195(67%) were primary school graduates, and 47(16%) were not literate.

Leftover drugs were kept at home by 155(53.3%) subjects; 155(51.2%) did not read the literature accompanying the drugs; 162(55.7%) kept the drugs in their refrigerators; 10(10.3%) preferred the freezer or the deep freezer; and 99(34%) kept them at a cool place inside the house.

The most common reason cited for keeping leftover drugs was to keep them for later use (Figure-1).

Overall, 177(60.8%) participants did not use unprescribed drugs; 161(55.3%) did not check whether the drugs they bought from the pharmacy were on the prescription; 97(33.3%) wanted the doctor to prescribe medication for later use, and, of them, 54(55.7%) were interested in analgesics (Figure-2).

Of the total, 142(48.8%) subjects used the drugs recommended to them; 114(39.2%) recommended drugs to others; 177(60.8%) regularly took vitamin-mineral supplement. The most preferred drug type was an oral tablet 139(47.8%); 162(55.7%) were informed about the possible side effects directly by the doctor; and 66(22.7%) were informed by the pharmacist.

In case of an occurrence of some side effect, 185(63.6%) subjects approached the doctor as the first option (Table).

Further, 160(55%) subjects would never use drugs advertised in media; 72(24.7%) could use such products after consulting a doctor; and, 154(52.9%) said nobody informed them on the usage ways of prescribed drugs and nutrients which should not be used together.

Of the total, 68(23.4%) subjects were provided information on their health conditions, such as allergy or chronic diseases, by their doctors if they were specifically asked, while 186(63.9%) said they were provided such information even when they did not ask.

Finally, 215(73.9%) subjects said the pharmacist welcomed them personally at the pharmacy, and 196(67.4%) were satisfied by the information on drugs and usage they received at the pharmacy.

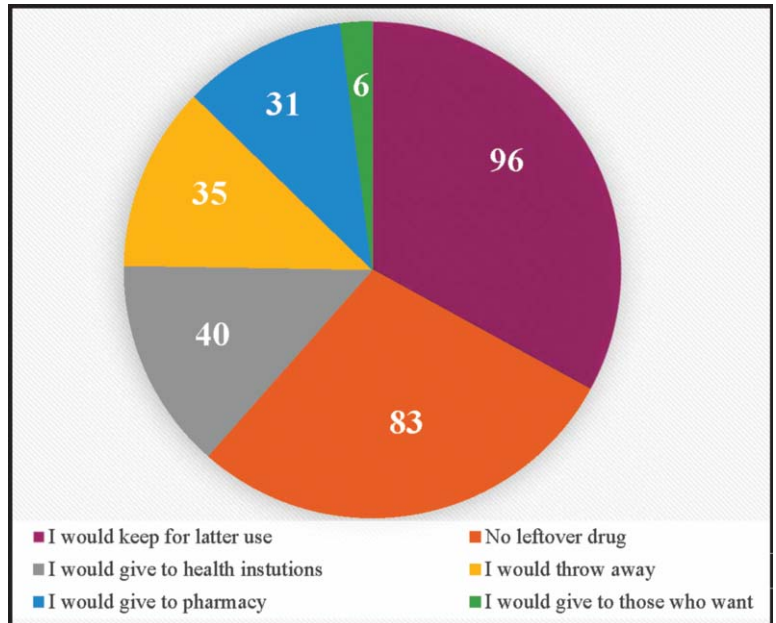


Figure-1: Post-treatment leftover drug conditions and related attitudes of the elderly.

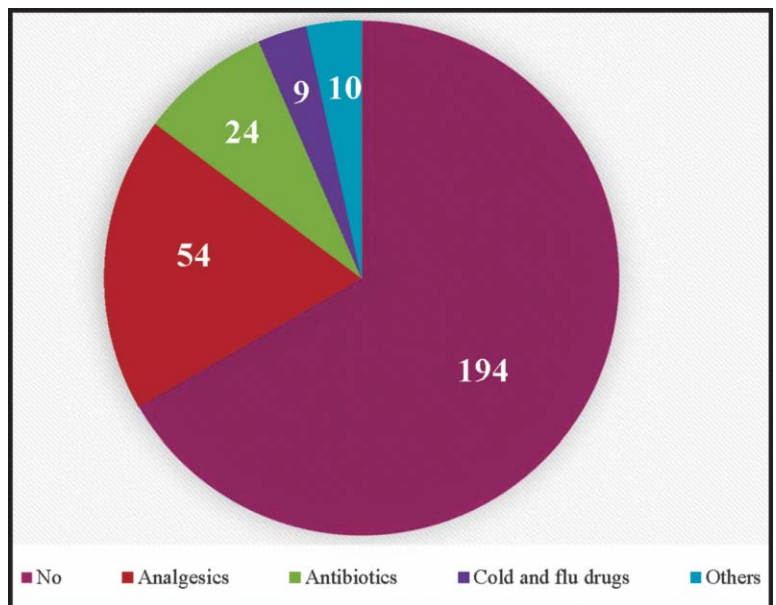


Figure-2: Drug-keeping for later usage.

Table: First reaction of the patients in case of medicinal side effects.

	Number	Percentage
I would refer to the Doctor	185	63.6
I would refer to Pharmacist	24	8.2
I would refer to Health Professional	16	5.5
I would quit medication and search for a solution myself	28	9.6
I would continue medication without doing anything	38	13.1
Total	291	100

Discussion

Most participants in the current study were females, which is in contrast with a study that showed male preponderance.²³

About 60% participants in the current study did not take any prescription medication which is in line with literature.^{24,25}

As was found in the category, drug-keeping at home is a common habit among the elderly.^{25,26}

The current study found that leftover drugs were most often stored for later use, while another study reported that the vast majority of leftover drugs were discarded.²⁷

Majority participants did not read the drug literature in the current study, while one study with university students observed that the majority read the prospectus.²⁵ This difference basically reflects the difference between the age and education level of the two samples.

Analgesics were the most common leftover drug in homes in the current study, which is in agreement with an earlier study.²⁸ The ratio of doctor and/or pharmacist telling the patients about the possible side effects of drugs was nearly 80% in the current study. In a study, clinicians were shown to be more likely to provide information about common side effects than pharmacists.²⁹

Conclusion

The drug usage habits of the elderly were not found to be rational, as more than half the subjects had leftover drugs at home.

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Conflict of Interest: None.

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