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Self-medication in the otolaryngology department of the Rostov-on-don hospital in 2018- 2019

Abstract

In Europe, Asia, Latin America, and around the world, self-medication consists of the use of drugs or medicines without a prescription. This group also includes the purchase and consumption of over-the-counter drugs, the reuse of previous prescriptions, or the use of drugs recommended by third parties. The main objective is to report on the periodic prevalence of self-medication in the otolaryngology department of the city of Rostov-on- Don in Russia during 2018 and 2019. Anamnesis and medical history reviews were performed on 2,279 patients from the otolaryngology service, both outpatients and inpatients at that hospital. Seventy-one percent of patients surveyed stated that they had ingested or administered pharmaceutical chemicals without a prescription during their current illness. These results provide important information to conclude that the figures for self-medication in Europe are alarming, with 7 out of 10 patients self-medicating before going to the doctor or experiencing a health problem related to the mouth, nose, and ears. Therefore, we can affirm that there is a high prevalence of self-medication and that it is a very common practice among the European population, specifically in southern Russia.

Keywords: self-medication, self-prescription, drugs, medicines, medication intake

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Abbreviations: WHO World Health Organization, AV Avenue, CETREMI Committee on Ethics and Transparency in the Physician-Industry Relationship

Introduction

The publication of this research work was made possible thanks to the collaboration of all medical staff and patients of the Otolaryngology Hospital in the city of Rostov-on- Don. This research paper addresses not only the prevalence of self-medication in Russia but also the consequences of this inappropriate practice, given that the number of patients who self-medicate without supervision is increasing every day. What is worrying is that this inappropriate practice is making effective and efficient medical care increasingly difficult. Currently, the prevalence of this practice ranges from 30% to 80% depending on the area.[1] Adequate medical care is affected not only because it increases the frequency of medical errors but also because it increases the costs of medical care.[2]

Self-medication can provide relief from symptoms, but this relief is temporary and fleeting, which can lead to confusion and misdiagnosis of a patient, considering that this practice carries significant risks to the patient's health, including adverse reactions, misdiagnosis, delayed medical care, high frequency of adverse effects, masking of pathologies, and, above all, bacterial resistance in the case of self-medication with antibiotics. In the latter case, it is important to mention that minimum doses and the appropriate duration of antibiotic use are not considered.[3]

This research was conducted from August 2018 to April 2019, surveying 2,279 patients from the outpatient and inpatient areas of the otolaryngology department at Rostov-on- Don Hospital in Russia. Through anamnesis, it was possible to identify whether they resorted to self-medication before going to the hospital for the appropriate treatment for their ear, nose, and throat conditions.

The purpose of this study is to determine whether self-medication has increased before the pandemic and to disseminate these results to raise awareness among the public that self-medication is an inappropriate practice and to reduce the frequency of this practice, considering that it is a health hazard according to the World Health Organization (WHO). It also aims to educate the general population about the consequences of self-medication, including the most vulnerable groups for whom the consequences can be fatal.[2,4]

Self-medication can be caused by various factors, the most important of which include: low socioeconomic status, low level of health education, time savings, indiscriminate sale of medicines by unqualified personnel, traditional and cultural influences, lack of access to health services, easy access to medicines, and poor quality of medical care.[2] The WHO states that "self-medication is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms".[5] This inappropriate practice increases health risks because it can mask the signs and symptoms of a disease and complicate the condition of the patient who is ill. A clear example is the diagnosis of acute appendicitis, where the patient, by taking painkillers, can mask the clinical picture and end up with severe peritonitis that can cause death.[5] After the pandemic, self-medication figures reported a considerable increase according to the study "Cross-sectional analysis of self- medication patterns during the COVID-19 pandemic in Ecuador," which reports a prevalence of 60.9% during the pandemic, leading us to infer that these figures increased after the pandemic.[6,7]

On the other hand, the International Pharmaceutical Federation and the Global Responsible Self-Medication Industry point out that this practice has some positive aspects, such as lower healthcare demand, reduced healthcare costs, rapid pain relief, and promotion of self-care, factors that we disagree with in this study because they are inadequate, inefficient, and, as we have discussed previously, make the doctor's work more difficult.[5] It has been observed that, with the arrival of the 2019 coronavirus disease (COVID-19) pandemic, the figures for self-medication consumption increased in several countries, among which we can highlight Russia, which has increased self- medication since before the pandemic.[6]

The Committee on Ethics and Transparency in the Doctor-Industry Relationship (CETREMI) notes that there may be confusion between self-medication and self- prescription, and therefore makes the following recommendations: drugs that can only be purchased with a prescription, drugs for which the pharmacy retains the prescription, drugs that can be dispensed for up to 3 months, medicines that require a prescription but can be refilled, medicines that do not require a prescription but are only sold in pharmacies, and medicines that do not require a prescription and can be dispensed in establishments other than pharmacies.[3] With this classification, we can ensure that the sale of medicines and pharmaceutical products will be a predisposing factor in reducing the high rates of responsible self-medication.[3,8]

Finally, it is necessary to mention that self-medication with antibiotics is a key risk factor for antimicrobial resistance because it encourages the evolution of resistant microorganisms, which are mainly found in hospitals and cause diseases such as pneumonia, tuberculosis, malaria, and gonorrhea. These diseases were previously easily treated but have now become a serious community health problem. This inappropriate practice can lead to delayed medical care, which in turn can lead to more serious and dangerous diseases for society and public health, turning these diseases into a catastrophic threat. The Centers for Disease Control and Prevention documented 18 microorganisms as public health threats, classifying them into three levels: urgent, serious, and concerning.[9,10]

Materials and methods

A descriptive cross-sectional observational study using random sampling was conducted. The study sought out patients who self-medicated, as confirmed through medical history and considering the researcher's ability to obtain truthful and verifiable information. Data was collected from a population of 2279 patients, both inpatients and outpatients, who had ingested medications without a prescription from a healthcare professional. The sample size was 1619 self-medicated patients from the second half of 2018 to the first half of 2019, with a 95% confidence level and a 5% margin of error. Patients who obtained medications with a prescription and/or were treated by physicians and healthcare professionals authorized to prescribe medications, as well as pediatric patients, were excluded. In addition, a literature review on medication was conducted, including articles published from 2017 onwards in PubMed, SciELO, MEDLINE, Elsevier, ScienceDirect and Google Scholar. This allowed us to determine the prevalence of self-medication in the city of Rostov-on-Don in 2018-2019, which was 71%, demonstrating that self- medication is very common in this medical area, To check the prevalence, the following formula was used: number of new cases divided by the population multiplied by 100%.

Results

Results: 2279 patients from the otolaryngology service of the Rostov-on-Don hospital were interviewed, of which 1619 patients resorted to self-medication, corresponding to a 71% prevalence. Adult patients attending the otolaryngology service were interviewed, excluding pediatric patients, from August 2018 to April 2019, corresponding to the second period of 2018 to the first period of 2019 (Figure 1).

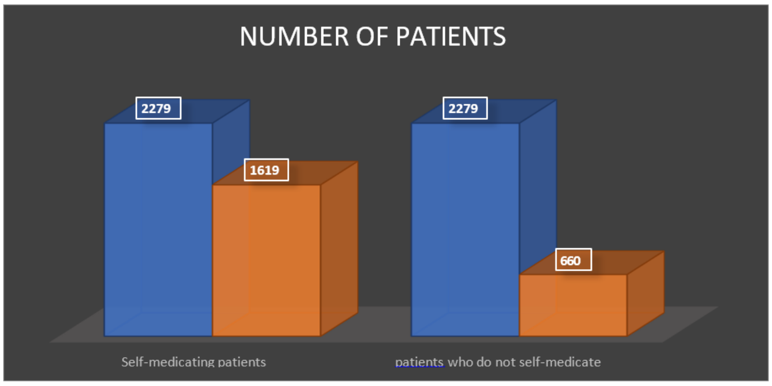

Figure 1 Number of patients.

This graph shows that the number of patients who self-medicate reached 1,619 out of the total number of patients interviewed, and that 660 of the total number of patients interviewed did not self-medicate, which implies that this inappropriate practice continues to increase over time. We can therefore infer that this practice is more common in Europe than in the Americas (Figure 2).

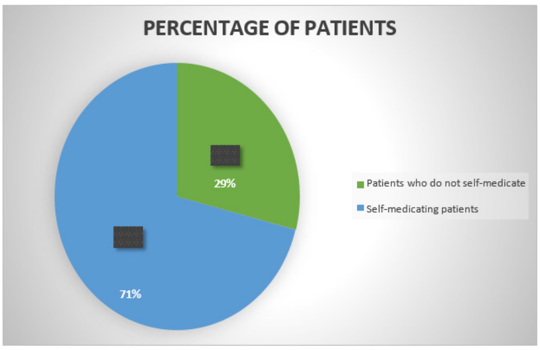

Figure 2 Percentage of patients.

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This graph shows that the percentage of patients who self-medicate reaches 71%, compared to only 29% of patients who do not self-medicate, which implies that this inappropriate practice continues to increase over time. Considering that in 2017 there was a prevalence of 40% in an Ecuadorian hospital, we can mention that this practice is more frequent in Europe than in the Americas.[1] The overall prevalence of self-medication practices in Gondar households was 50.2%, reinforcing the theory that the global prevalence ranges from 30% to 80%.[4]

Discussion

We can mention that these types of studies are very important because they clearly illustrate the problem of self-medication and serve as a starting point for other researchers who are encouraged to investigate more in-depth topics. As the practice of self-medication increases over time and is more common in Europe than in Latin America. Of the sample, 1,619 patients self-medicated, equivalent to 2,279, which corresponds to 71% of the population studied. These results show us that the figures for self-medication are very high, which is very important because it allows us to obtain real figures for this inappropriate practice. It also allows us to observe that the figures are increasing and that this is detrimental to public health and encourages medical malpractice, which complicates the work of healthcare personnel, increases bacterial resistance, increases the likelihood of adverse reactions to medication, and opens the door to future research related to self-medication, bearing in mind that this practice can be harmful to the health of the world's population. The groups that self-medicate the most are children through their young parents, young adults, and older adults with catastrophic illnesses, which is why it is a public health challenge to prevent this practice in Europe and around the world.

Conclusion

These types of studies are essential for advancing the research process, as they serve as a starting point for future high-quality research with significant scientific value. The findings show that before the pandemic, self-medication rates were alarming, reaching 71%, meaning that 7 out of 10 patients self-medicated before going to a doctor for proper assessment and treatment. Furthermore, we can infer that this practice is gaining ground and has become permanently established in our population, and that healthcare professionals are obliged to raise awareness of the dangers of taking medicines without a prescription from a healthcare professional, It is clear that it is very easy to acquire medicines and that treatments are not fully complied with, which has dangerous repercussions for patients, such as antibiotic resistance, health complications, increased financial costs for the patient, and, above all, an uncontrollable impact on public health, which is exacerbated by advertising on television and in the media.

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Conflict of interest

The authors declare that there is no conflict of interest with self-financing.

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