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Prevalence of Self-medication and the Effect of COVID-19 Pandemic, Personal Experience

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Abstract

Background

Although a global challenge, self-medication is a growing problem in our country. Raising public awareness of the problem is urgently needed. Prophylactic measures of the COVID-19 pandemic have further increased the prevalence.

Methods

This prospective study was conducted at my private ENT (Ear, Nose, and Throat) clinic in Almahawil District, Babylon, Iraq. I am making a comparison of the prevalence of self-medication in my patients between a period of 6 months before (from January 1st to June 30th, 2019) and a 6-month period following (from January 1st to June 30th, 2022) the COVID-19 pandemic to assess the prevalence of the practice of self-medication and the likely impact of COVID-19 lockdown restrictions on its progressive rising. This study included 5400 patients with ENT disorders, 2520 patients in the first phase, and 2880 patients in the second phase.

Results

Age ranged from 3 months to 84 years. The male: female ratio is 1.2:1 in the first period and 1.3:1 in the second period. The spectrum of diseases is so broad that it covers almost the entire field of ENT medicine. The drugs that are used as self-medication are also diverse. In the first period, 1360 (54%) of the patients self-medicated prior to their clinic visit, while in the second period, 2160 (75%) of them self-medicated prior to their Clinic visits.

Conclusion:

Self-medication is far from safe practice, is a growing challenge to our healthcare system, and poses a major public health concern; COVID-19 Pandemic probably initiated changes in behavior leading to excessive self-medication.

Keywords

COVID-19, Self-Medication, Prevalence.

Self-medication is defined by the World Health Organization (WHO) as use by the patient of medicinal products on our own initiative or on the advice of a pharmacist or layperson rather than medical advice [1].

Self-medication is not only a problem in one area itis more of a global phenomenon.[2] A review has highlighted this pervasive problem.[3]Self-medication includes obtaining medication without a prescription, submitting previous prescriptions to buy medication, sharing medication with family members or community members, or using leftover medication kept at home.[1]This Behavior varies by age group, gender, and Country. [4].

As explained by the WHO, "Self-medication includes the use of drugs by the consumer to treat a self-diagnosed disorder or symptom, or the intermittent or continuous use of drugs prescribed by a physician for chronic or recurring illnesses or symptoms." [1] Self-medication may be associated with several risks for the Self-care patient and in some cases for the community [1][5][6]. Inappropriate medicines use in self-medication has also been noted, [7], [8] which may include taking insufficient doses, sharing drugs with others, short length of therapy, and stopping drugs once symptoms of the illness improve. However, despite the prevalent problem of irrational use of drugs, no systematic review has been performed to assess drug use patterns in Iraq. We require evidences from well-planned studies of drug use by the general population to assist in planning and applying specific policy and interferences to put a stop to extending irrational use of drugs. As a part of self-care, responsible self-medication has been clarified by the WHO as "the practice by which people treat ailments and conditions with drugs that are licensed and available without a prescription and are safe and effective when used as directed."[9]

On March 11, 2020, the (WHO) declared that COVID-19 constitutes a global pandemic[10]. In order to control the COVID-19 pandemic and prevent health systems from being overloaded, a lot of countries have adopted plans to reduce the extension of the illness. [11][12] These plans included people containment and unnecessary travel bans. Each country sets its own restrictions and lockdown periods based on the rates of national infection. Although the responses of governments to the pandemic have varied.[13] However, scientific studies on self-medication and its risks during the pandemic of COVID19 are missing. The practice of self-medication is markedly prevailing in Iraq. As far as we know, there are few or no studies carried out in Iraq on self-medication. The results of this study are important for generating basic data for Iraq. The aim of this research is to determine the prevalence of the practice of self-medication and the likely impact of COVID-19 lockdown restrictions on its progressive prevalence.

Patients And Methods

This prospective study was conducted in my private ENT clinic in Almahawil district, Babylon, Iraq in two different periods, before and after the COVID-19 pandemic. Patients of all ages who introduced themselves in the ENT clinic were included in the study. The information included demographics such as age and gender, in addition to the history of ENT disorders, and physical examination. If the patient has already self-medicated, the types of medications used by the patient are recorded. I am making a comparison of the prevalence of self-medication in my patients between a period of 6 months prior (from January 1st to June 30th, 2019) and a period of 6 months following (from January 1st to June 30th, 2022) the COVID-19 pandemic. Patients with regular (check-up) visits are excluded from this study. In the first period, 2520 patients were enrolled, of whom 1360 (55%) self-medicated prior to their clinic visit. While in the second period 2880 patients were included. 2160 (75%) of them have self-medicated before their Clinic visits.

Results

During the study period, 5400 patients with ENT diseases were enrolled, 2520 patients in the first phase and 2880 patients in the second phase. The ages ranged from 3 months to 84 years. The male: female ratio is 1.2:1 in the first period and 1.3:1 in the second period. The spectrum of diseases is so broad that it covers almost the entire field of ENT medicine. Ear pathologies like earwax, temporomandibular joint disorders, external otitis, otomycosis, acute and chronic otitis media, mastoiditis, hearing loss, dizziness, and tinnitus. Conditions of the nose as epistaxis, allergic rhinitis, acute and chronic rhinosinusitis, nasal polyposis, hematoma, and abscess of the nasal septum. Throat conditions: acute and chronic pharyngitis, acute and chronic laryngitis,

allergic pharyngitis and laryngitis, vocal cord injuries, and laryngeal tumors. Drugs used as self-medication can include a wide variety: Antimicrobials: penicillins, cephalosporins, aminoglycosides, macrolides, ciprofloxacin, lincomycin, metronidazole. Analgesics: paracetamol, nonsteroidal anti-inflammatory drugs.

Antihistamines including cinnarizine, and betahistine, (histamine analogue).

Steroids: betamethasone (ampoules), hydrocortisone (vials), dexamethasone (ampoules and tablets), prednisolone (tablets).

Cough syrups: both suppressants and expectorants

Topical preparations: nasal drops and sprays, ear drops, skin creams and ointments, mouthwashes, and mouth gels

I registered 2520 patients in the first period from January 1st to June 30th, 2019, a period of 6 months before the COVID-19 pandemic, of whom 1360 (54%). Self-medicated prior to their visit to myclinic***(Figure1)***.

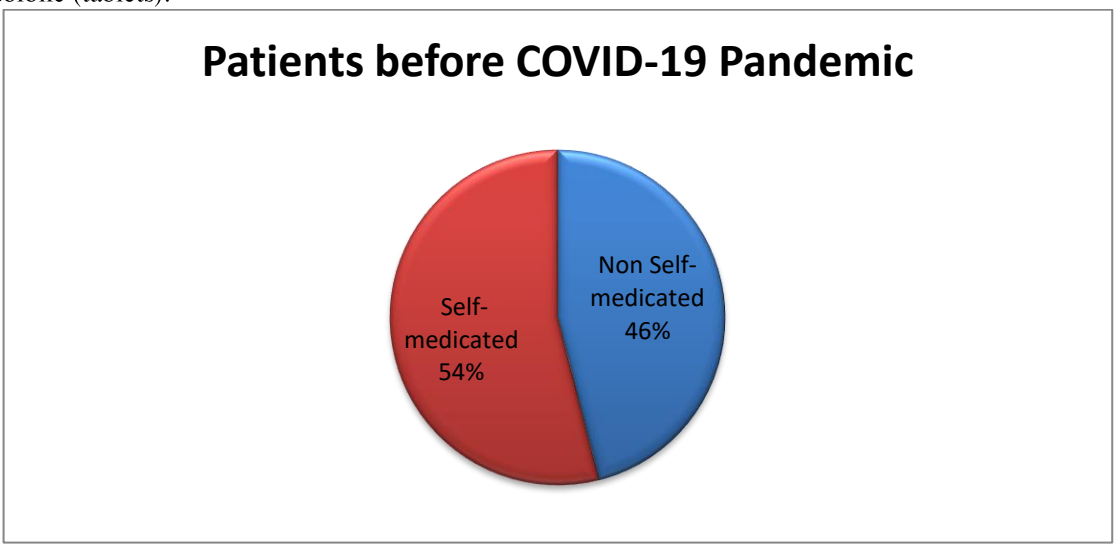

Figure 1: The Prevalence of Self-medication Patients before The Pandemic

In the second period, a 6-month period, following the COVID 19 pandemic, from January 1st to June 30th, 2022, 2880 patients were enrolled, of whom 2160 (75%) self-medicated prior to their Clinic visits***(Figure 2)***.

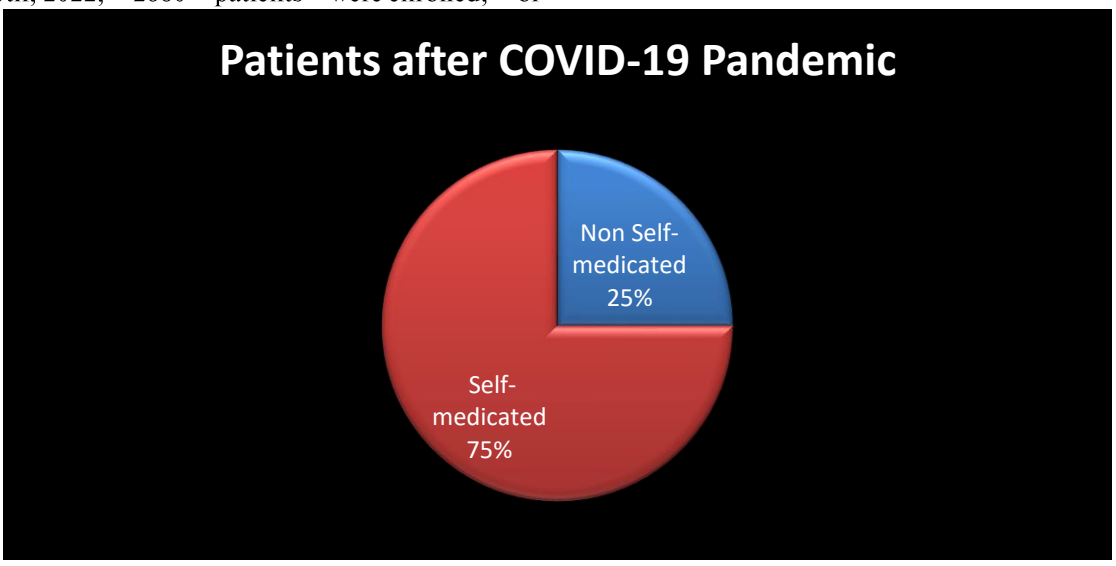

Figure 2: The Prevalence of Self-medication Patients after The Pandemic

Discussion

Several studies have shown that the practice of self-medication is widespread and the prevalence varies worldwide. I used to report data on my patients' self-medication in the years before the COVID-19 pandemic era, and the problem was progressively increasing. After the Pandemic lockdown restrictions became less and less, I resumed reporting self-medication patient information, the phenomenon increased significantly. Actually, it is not a local problem but a widespread problem.[3] It seems that The COVID-19 pandemic may further widen the problem due to insufficient access to healthcare, particularly in countries with weak Health Systems like ours.[12] [14] Some factors which may add to self-medication behavior after the COVID-19 pandemic may include restricted visits to hospitals to avoid acquiring COVID-19 [15], and internet use for health information. Widespread COVID-19-related information or rumors have added to self-medication as they spread inaccurate data about the medicines possibly used in the treatment and prevention of COVID-19. [16]

The reasons for self-medication varied between studies. Regarding antibiotic self-treatment, for instance, there was poor regulation of antibiotics due to the lack of rigid application of guidelines, and the habit of taking antibiotics from pharmacies without a doctor's prescription or obtaining antibiotics from abroad or online, are among the reasons cited for this problem. [17]–[19] Other elements which include sociocultural and financial elements also can result in the irrational use of antibiotics. An instance is the notion of the Middle Eastern populace that antibiotics can boost up a person's healing and remove and deal with any infection, irrespective of its origin, and without unique recommendations for antibiotic use[18] This notion and the demand for antibiotics can further burden healthcare providers with improper and unnecessary prescriptions or dispensing and increased practice of self-medication with antibiotics. Self-diagnosis and the desire of people to purchase antibiotics in sub-therapeutic quantities to treat or prevent disease are socially accepted practices in Middle Eastern countries and can lead to the unwise use of antibiotics. Keeping antibiotics at home from incomplete courses, even sometimes passed the expiration date of the product, and then self-administering these drugs for self-diagnosed illnesses or sharing with friends or family also influenced self-medication.[17][19]–[23] The absence of health insurance, the economic situation, and difficult access to medical care have led some people to self-medicate and look for ways to save on costs, such as going directly to healthcare providers, and pharmacists and avoiding doctor visits, or saving on medication costs by getting them from family members, or store leftover medication for later use.[20][22][18][19][24]–[26] Time saving, previously succeeded experience with a similar disease, and recognition of previously prescribed medications were also given as motives for self-medication.[20][25]–[27] Unawareness of the risks and effects of irrational antibiotic use, in addition to misunderstanding and indecision about the action of antibiotics and the etiology of disease, in case of bacterial or viral, may contribute to the self-medication of antibiotics. [18][23], [24][26] People in the Middle East took data about the drugs they were using for self-medication from a variety of sources. Most studies reported this through friends or family [19][28] and previous successful experiences with the same drug. [17][25] Over-the-counter medications were obtained from a variety of sources, including bulk pharmacies [18][25][27] pharmacies and relatives/friends.[24][27

In the studies, some suggestions were put to minimize irrational drug use. The suggestions included the adaption of regulatory instructions limiting arrival to prescription medicines in areas where drugs are accessible without a prescription [22][24]–[26]; Restricting the over-prescription by the physician by taking proper actions, e.g. by asking physicians to prescribe the accurate number of capsules or tablets for a given treatment time[29]; Upskill healthcare givers, particularly pharmacists, to support their role in directing patients on the right use of prescribed medications and to dispense drugs only with a prescription[20][25], [26]; and set up a collection of evidence-based national treatment instructions.[18][22] Another suggestion seen in many studies was enhancing the use of social media campaigns to efficiently target public learning programs.[21][18][24]–[27] These campaigns should aim to extend data about the proper use of drugs and the potential risks associated with their inappropriate

use. Raising awareness about the risk of drug-related adverse events, policies, and regulations related to the use of different drugs can be useful to avoid adverse consequences associated with self-medication

Conclusion

Self-medication is a growing challenge for our healthcare system and should be highlighted as an issue of public concern.

The COVID-19 pandemic has likely triggered behavioral changes that minimize visits to physicians and result in improper and excessive self-medication.

Given the risks of self-medication, health policymakers should adopt strict policies minimizing the arrival of prescription-only drugs in countries (like ours) where many drugs are available without a prescription.

Physicians, pharmacists, the community, and the government have a very important role in preventing risks related to self-medication.

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Competing interests

The author declares that he has no competing interests.

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