

EVALUATION OF ANALGESICS USE AND MISUSE BY IRAQI PATIENTS IN BAGHDAD COMMUNITY

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ABSTRACT

Objectives: Analgesics, which currently represents the cornerstone of pain treatment, is one of the most widely used and abused medications all over the world. Since analgesics used and misused widely in Iraqi community, the possibility of complications and adverse effect development from analgesics may be significant. The purpose of this study is to assess the attitude and degree of awareness about the correct use, side effects, and complication of improper use of analgesics in Baghdad community and to find if there is any correlation between the miss use of analgesic and the need to extra medication or treatment as a result of analgesic adverse effect.

Methods: This study was a cross-sectional survey using a pre-tested self-administered questionnaire which carried out in the different community pharmacy in Baghdad. An 11-question questionnaire collects demographics information and attitudes to use analgesics by respondents.

Results: Analgesics consumption increases with age. The majority of users, 46% reported taking analgesics for unspecified general body pain, followed by a headache and other types of pain. (50.26%) of participant use analgesics frequently (more than 3 times weekly) and (57.44%) of them prefer a certain type of analgesics and used it frequently. Larger percentage of analgesics recommended to Iraqi patients by a pharmacist, followed by a doctor, or sometimes according to advice from a relative\friend while only (18.46%) were prescribed by patients themselves. Interestingly, (52.82%) of respondents have no information about the side effect, and higher percentage of them (61%) do not adhere to doses prescribed. About (11.28%) of respondents need for hospitalization, (58%) consult a physician, and (56%) use another medicine as a result of side effects or complications of analgesics. Significant correlation confirmed between misuse of analgesics and the need for hospitalization and patients need another medicine to treat side effects or complications of analgesics.

Conclusion: Analgesics consumed widely and most of the times incorrectly by Iraqi people in Baghdad and its usage usually associated with many complications as a result of a misuse by the patients due to improper dispensing information or education provided by a pharmacist or other health care providers about the correct use or side effects associated with these medications.

Keywords: Analgesics, Awareness, Misuse, Attitude, Non-steroidal anti-inflammatory drugs.

INTRODUCTION

Pain is an uncomfortable emotional experience often related to tissue damage. Analgesics are one of the most widely used and abused medications all over the world [1]. Analgesics currently represent the cornerstone of pain treatment, with various types and groups of drugs available such as acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs), and narcotic analgesics [2]. Many people immediately take analgesics with all kinds of minor disorders. Using analgesics, particularly over-the-counter (OTC) products heavily has long been linked to chronic renal failure. Several studies have reported associations between chronic renal failure and the use of other forms of analgesics, including acetaminophen, aspirin, and other NSAIDs [3].

Furthermore, regular analgesic use was independently associated with an increased risk of hearing loss. The increased risk of hearing loss seen with regular analgesic use was greatest among younger men, particularly those below age 60 [4].

Convince the patients about the complications associated with abuse and misuse of analgesics is the cornerstone in controlling the unnecessary use of analgesics. In addition to that if we understand patients' demeanor to analgesic utilization that may improve the cooperation and effective communication between the clinician and patient, furthermore, this will improve future education strategies to patients [5].

Since analgesics used and misused widely in Iraqi community and new OTC products are introduced frequently, the possibility of complications and adverse effect development from analgesics may be significant,

thus continued evaluation of these products for any adverse effect is warranting.

The purpose of this study is to measure the attitude and degree of awareness about the correct use, side effects, and complication of improper use of analgesics in Baghdad community, and to find if there is any correlation between the miss use of analgesic and the need to extra medication or treatment as a result of analgesic adverse effect.

This study is the first study which correlates between the misuse of analgesics and the complication of its use.

METHODS

This study was a cross-sectional survey using a pre-tested self-administered questionnaire which carried out in the different community pharmacy in Baghdad from March 1, 2014, to January 1, 2015. An 11-question questionnaire was designed to evaluate the use and misuse of analgesics in Baghdad community.

The questionnaire was applied to every consumer who inquired about and/or bought OTC analgesic or has prescription contain analgesics in selected pharmacies. In total 250 questionnaires, 195 questionnaires were filled in correctly, and they were analyzed (response rate 78%). To take part in our investigation, the community pharmacists were educated how to use and correctly fill in the questionnaire with the patients' information. The questionnaire was preliminarily tested for 3 days. The collected data were analyzed, and consequently, the questions and card were corrected.

A questionnaire collects demographics information and attitudes to use analgesics by respondents such as the preference, frequency of use, prescription manner, the degree of adherence, knowledge about the side effects\complications that may occur as a result of misuse of these drugs. Information about the need for visiting a physician, hospitalization, or using the additional drug to treat a complication of analgesics also collected. A mixture of multiple choice questions and closed questions answered by "Yes or No" were asked.

Community pharmacies have been chosen because both rural and urban population of different classes and socio-economic background daily come to this outpatient pharmacy from various parts of Baghdad to take treatment to their common diseases.

The SPSS statistical software package for social sciences Version 14 (SPSS v. 14) was used for Pearson correlation coefficient analysis.

RESULT

Demographic characteristics

The sample consisted of 195 respondents: 61 (61%) females and 76 (39%) males; analgesic use was more common in females. As can be seen in Table 1, the consumers 50+ years of age and between 41 and 50 years are the most frequent users of OTC analgesics. While younger age group between 15 and 20 years are the lowest users for analgesics.

Analgesic use

The majority of respondents, 46% reported taking analgesics for unspecified general body pain, 25% of the users took analgesics for the headache, 23% of users used analgesics for other types of pain, 5% of the users reported taking analgesic for menstrual pain, while only small proportion 1% used analgesic for a toothache as shown in Fig. 1.

Frequency of use of analgesics

As seen in Fig. 2, 50.26% of respondents use analgesics frequently (more than 3 times weekly), 27.69% use analgesics at least once weekly; while only 14.87% of respondents use analgesics less frequently (at least twice monthly) and only 7.18% do not use analgesics unless its prescribes by pharmacist or doctor.

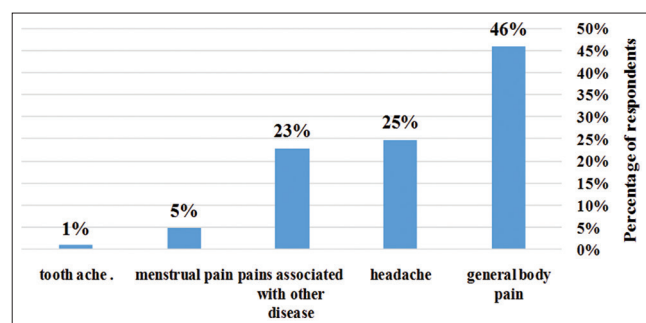


Fig. 1: Analgesics use

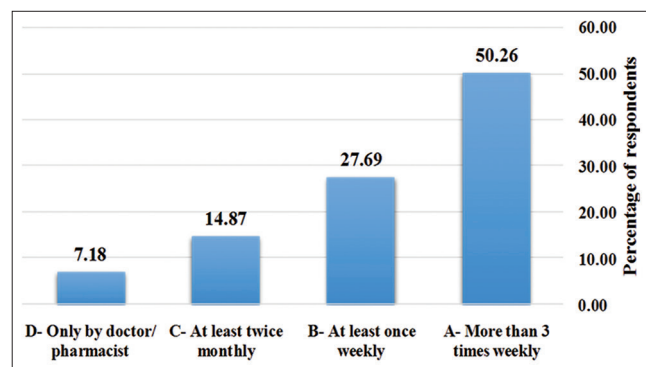


Fig. 2: Frequency of use of analgesic

Analgesics preference

Fig. 3 showed that 57.44% of analgesics users preferred a certain type of analgesics and used it frequently, and 26.67% use only what prescribed by a doctor or pharmacist while only 15.9% do not prefer a specific type.

Analgesics doses preference

As shown in Fig. 4, a higher percentage of users (46.15%) committed to doses of their prescriber. A 34.87% of users prefer the lowest dose of any analgesic they take while 18.97% always start from higher doses.

Prescription manner of analgesics

The respondents reported that 34.36% of analgesics recommended by a pharmacist, 25.64% by a doctor, and 21.54% by advice from a relative\friend while 18.46% were prescribed by themselves (Fig. 5).

Information about side effect or complication of analgesics

Fig. 6 reveals that 52.82% of users have no information about the side effect, and 22.05% have these information from a pharmacist. The doctor is the source for only 8.72% while 16.41% depend on another source to know these information.

Adherence to prescription

A higher percentage of respondents (61%) do not adhere to doses, frequency, and maximum number of tablets prescribed by doctors or pharmacists while only 39% follow the prescription (Fig. 7).

Need for hospitalization due to complication of analgesics

Only 11.28% of respondents need for hospitalization as a result of

Table 1: Demographic characteristics of respondents

Category	Sub-category	Proportion (%)
Sex	Male	39
	Female	61
Age groups	15-20	3
	21-30	11
	31-40	24
	41-50	27
	50+	35

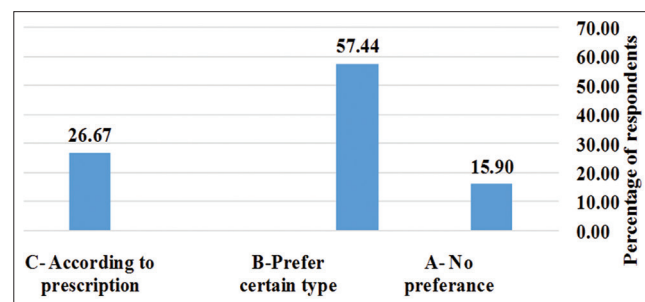


Fig. 3: Analgesic preference

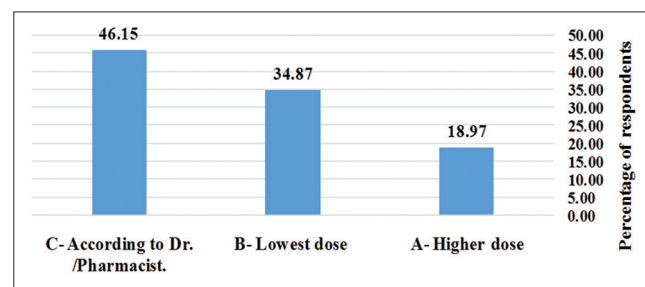


Fig. 4: Analgesics doses preference

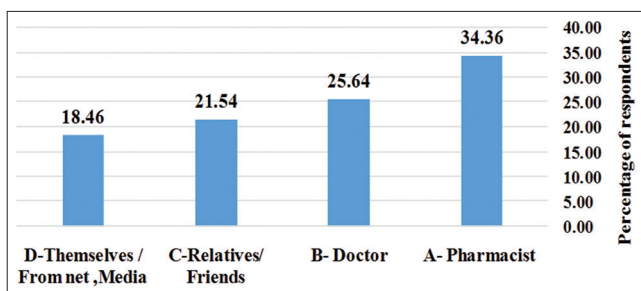


Fig. 5: Prescription manner of analgesics

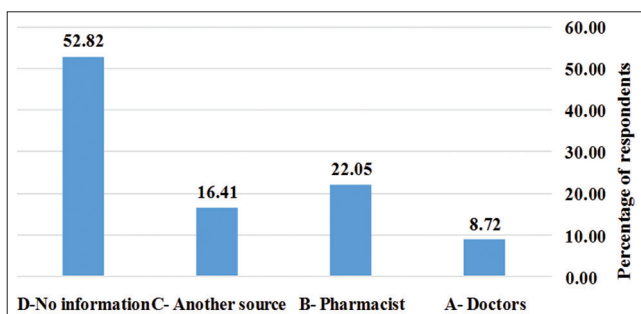


Fig. 6: Information about side effect or complications

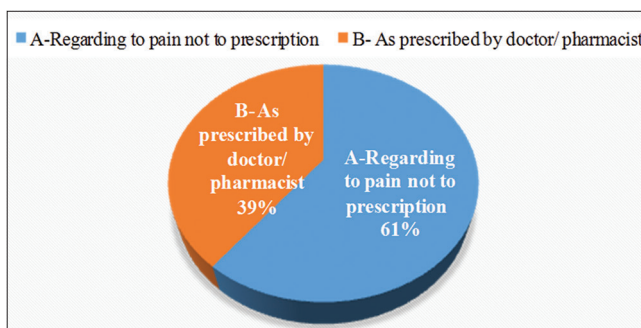


Fig. 7: Adherence to prescription

side effect or complication of analgesics, while the higher percentage 88.71% do not need it (Fig. 8).

Need to consult physicians due to complication of analgesics

58% of respondents consult a physician as a result of complication or side effect of analgesics while 42% do not need that (Fig. 9).

Need for another medicine to treat side effect or complication of analgesics

About 56% of respondents use another medicine as a result of complication or side effect of analgesics use while 44% do not need that (Fig. 10).

Correlation between different parameters on patients need for hospitalization: A significant correlation was proven between misuse of analgesics and need for hospitalization as seen in Table 2.

Correlation between different parameters on patients need for another medicine to treat side effect or complication of analgesics: A significant correlation was proven between misuse of analgesics and need for another medicine to treat side effect or complication of analgesics as seen in Table 3.

Correlation between different parameters on patients need to consult physicians due to complication of analgesics: A significant correlation was proven between the non-adherence to prescription and need for

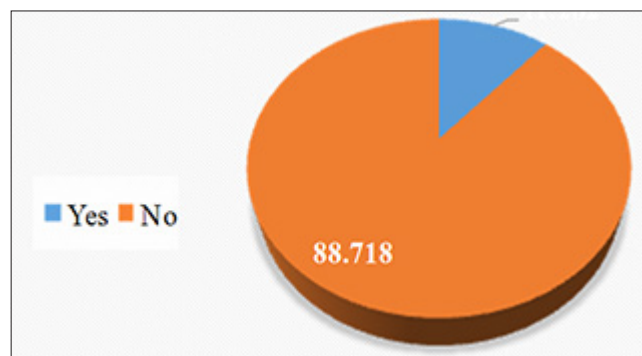


Fig. 8: Need for hospitalization due to complication of analgesics

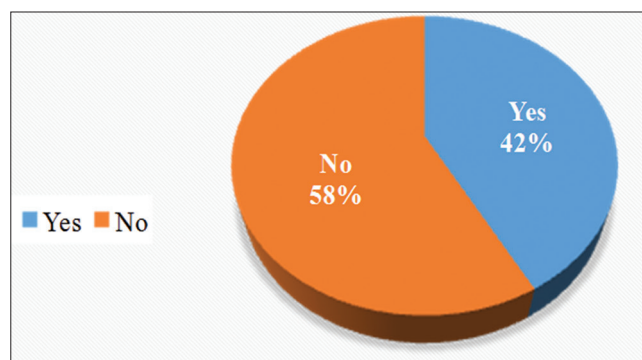


Fig. 9: Need to consult physicians due to complication of analgesics

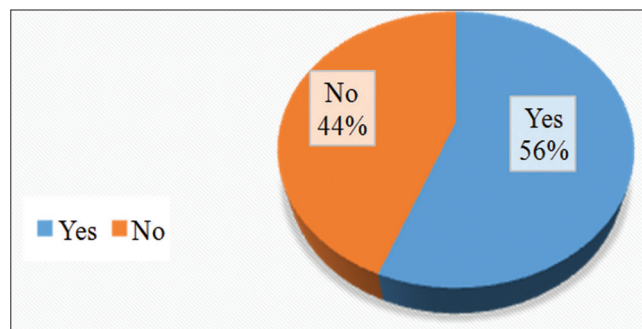


Fig. 10: Need for another medicine to treat side effect or complication

another medicine to treat side effect or complication of analgesics as seen in Table 4.

DISCUSSION

Analgesics provide patients with a way to treat minor pain. While these medications are safe when used as directed, they have the potential to cause serious adverse effects when misused by susceptible populations. This study showed that most patients use analgesics are elderly like many previous epidemiological studies which have estimated that approximately 20% of elderly people are taking analgesics, and the majority are using these medications for greater than 6 months' duration [6,7].

The major uses for these analgesics as shown in this study are to treat general body pain, headache similar finding was also reported by Modupe *et al.* [1].

The present study showed that more than half of the participants in Baghdad using analgesics frequently while a very low percentage take only prescribed analgesics, and this can be attributed to the availability

of nonprescription, or over-the-counter, analgesics that allows patients to treat their pain without having to visit a health care provider. The above result is similar to an epidemiological study done by Christie in 1975 that indicate.

"In a small town in Victoria, Australia, in 1975, 28% of the population admitted to taking at least 1 analgesic per week 52. The range was from 1 to 56 doses per week, with a median intake of 1.9 doses per week in those who took any analgesic" [8].

About (57%) of responders prefer a certain type of analgesics; hence, it provide a good response to them, so they continue to use it repeatedly without counseling from health care provider, this can be accepted in the absence of symptomatic complaints or any contraindications to this analgesic in the patient. This type of patients should be counseled on the signs and symptoms of common adverse events or complications which may occur by repeated or frequent use of this drug without counseling from health care provider.

The study showed that 46% of patients committed to the doses prescribed by doctors or pharmacists and about 35% prefer use analgesics with a lowest dosage strength available if they use it without prescription, this can be attributed to the fact that most health care providers especially pharmacists always tried to improve peoples' knowledge and attitudes regarding analgesic use by describing the adverse effects of these medications and the importance of avoiding higher doses, so most patients prefer to commit to their prescribed doses. In another hand, about 19% of participants take doses higher than what prescribed or prefer to start with a higher dosage strength and that may be related first to their tendency to mask their intense pain rapidly as they thought by using the highest dose or second, they may lack the knowledge from health care providers or pharmacists about the side effects or complications of high dose of analgesics. This lack of awareness about the correct consumption of these analgesics can subject patients to serious side effects [9].

Regarding prescription pattern of analgesics, pharmacists followed by doctors prescribe most utilized analgesics and responders prefer pharmacists over doctors to consult about the use of analgesics, in contrary to a study done by Mahmood Alqallaf [10] on Bahraini people who found that analgesics consumers prefer doctors rather than pharmacists.

This can be explained since the consultation of pharmacists is free in Iraq while visiting a doctors cost a lot of money in many cases, in addition to that about 40% of responders use analgesics according to information from medical websites or take advice from their relatives\ friends rather than consulting a doctor or even a pharmacist and that can be attributed to their partial knowledge about analgesics, or they may have a relative that respond well to certain type of analgesics and they think the same analgesics would help them also. Those people may be subjected more than others to the side effects of these medications or may harm themselves by incorrect use since they lack the sufficient information or sometimes follow wrong, misleading information from the internet about the correct use of analgesics, side effects, and contraindications so the role of the health care providers and responsible committee's in Iraq is to raise the awareness of people to use these medications safely and decrease the percentage of people who take analgesics without consultation.

Results showed that more than half of the respondents did not have sufficient information about side effects or complications of analgesics. This result similar to a study done by Cham *et al.*, which indicate that "between 50% and 90% of NSAID users are unaware that these medications can cause ulcers or renal injury and more than half of acetaminophen users are unaware that overuse could cause liver injury" [11].

Insufficient information provided by pharmacists or other health care providers which provide the patients with dose-related information

Table 2: Correlation between different parameters on patients need for hospitalization

Parameter	R	P
Not adhere to prescription	0.16	0.026*
Frequency of use of analgesics	0.147	0.041*

*Significant correlation between the parameter and patients need for hospitalization

Table 3: Correlation between different parameters on patients need for another medicine to treat side effect or complication of analgesics

Parameter	R	P
Not adhere to prescription	0.17	0.016*
Frequency of use of analgesics	0.24	0.001*

*Significant correlation between the parameter and patients need for another medicine

Table 4: Correlation between different parameters on patients need to consult physicians due to complication of analgesics

Parameter	R	P
Not adhere to prescription	0.19	0.007*
Frequency of use of analgesics	0.013	0.860

*Significant correlation between the parameter and patients need to consult physicians due to complication of analgesics

only may allow consumers to believe that they can take these medications safely.

This study reveals that only small percentage of users adhere to the dose prescribed by their physician, and most of them do not adhere to their doses, frequency, and maximum number of tablets prescribed by doctors or pharmacists, this may be attributed to poor knowledge of complication and to the fact that most analgesics users use these medications to control their pain, so they used these drugs when they needed rather than as directed by their prescriber. Similar finding was reported by Lai *et al.* in (2002) [12], which indicates that a higher percentage of analgesics users are not adhere to their medication. Furthermore, Heard *et al.* [13] was reported "potentially significant rate of patients who reported taking excessive doses of over-the-counter analgesics."

Many studies proved that the analgesics use specially NSAIDs is accompanied with a high incidence of gastrointestinal (GI) irritation and ulceration [14] and even mortality [15,16].

Hospitalization as a result of a complication of analgesics required by only <12% and this low percentage can be explained since many patients consult their doctors before the condition worse.

Need to consult physicians due to complication of analgesics needed by 42% of consumers that mean they subjected to adverse effect of these medications and that may result in extra cost to treat the complication which could be avoided if we improve the role of health care provider to increase the awareness of patients about the appropriate use of analgesics and warn them about the adverse effects they may provoke.

To reduce or treat GI tract irritation about 56% of participant consume a proton pump inhibitor or H₂ receptor antagonist or antacid, and this would add additional cost to the treatment and subject users to side effect of these medications. This high percentage can be decreased if pharmacists or other health care provider raise the awareness of patients about the correct use, the importance of adherence to prescription and avoid using these medications without consultation from a specialist.

The correlation between the improper use of analgesics and the need for hospitalization, visiting physicians and using of additional medicine to treat side effects or complications of analgesics was seen in this study. This correlation emphasized that analgesics should be cautiously consumed under the supervision of a health care professional to minimize the side effects and complications of these medications.

CONCLUSION

Analgesics consumed widely and most of the times incorrectly by Iraqi people in Baghdad and its usage usually associated with many complications as a result of a misuse by the patients due to improper dispensing information or education provided by a pharmacist or other health care provider about the correct use or side effects associated with these medications.

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