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Prevalence of NSAID drugs used among Nurses in Ibn-Sina Hospital- Coast Hadhramout - Yemen.

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Background: NSAIDs are among the most commonly used drugs worldwide, used by more than 30 million people every day. More than 111 million prescriptions are written for NSAIDs in the USA annually, and they account for approximately 60% of the USA over-the-counter (OTC) analgesic market. Non-steroid anti-inflammatory drugs (NSAIDs) are a widely used therapeutic group in the world particularly in the Yemen population. This holds true for both prescription regimes and self-medication. They are one of the most common medications used in primary health care globally because of their low abuse potential, strong efficacy, and long-term clinical use to reduce or relieve various types of pain. NSAIDs provide medical benefits, but they are well known to affect the gastrointestinal tract, kidneys, liver, and cardiovascular system adversely. Additionally, they interact with various medications, such as

warfarin and aspirin. **Objective:** To evaluate the prevalence of NSAID drugs used among nurses in Ibn-Sina Hospital- Coast Hadhramout - Yemen. **Subject and Methods:** The study design was a descriptive cross-sectional -based study carried out from (March–May) 2020 among 130 random nursing in Ibn-Sina Hospital- Coast Hadhramout - Yemen by using a self-administered questionnaire. **Results:** The statistical analysis for data obtained in this study showed that the majority percentage of the prevalence of NSAIDs used as self-medication was rarely (36%) and Yes (30%) NSAIDs used (self-medication), but (37.6%) NSAIDs prescribed to patients. Among nursing workers in Ibn-Sina Hospital in Coast Hadhramout governate. Yemen. **Conclusion:** The present study indicates that the use of nonsteroidal anti-inflammatory drugs NSAIDs for nurses (self-medication) and their description of patients was widely practiced at Ibn-Sina Hospital. It is therefore in urgent need to make them aware of the pros and cons in order to ensure the safe use of medicines.

Keywords: NSAID, Self-medication. Nurses. Hadhramout – Yemen.

Introduction

Non-steroidal anti-inflammatory drugs (NSAIDs) are widely prescribed because of their analgesic and anti-inflammatory properties. Their use is associated with the occurrence of serious adverse drug events (ADEs), particularly in the gastrointestinal, cardiovascular, and renal tract. (1,2). To limit the occurrence of such ADEs, guidelines have been developed and recommend avoiding the prescription of these drugs in patients with known risk factors for the development of ADEs, such as old age, comorbidity, or concurrent use of interacting medication. (3,4). In many countries, NSAIDs are freely available over-the-counter (OTC). The use of OTC NSAIDs and other OTC analgesics appears to be widespread. (5,6).

In general, short-term use of NSAIDs is considered relatively safe, provided it is used in OTC doses by adults without contraindications or interacting medications. (7). However, in previous studies performed in the UK and Australia, around one-quarter of all OTC analgesic users were found to do so at a dosage exceeding the maximum dose, and one-third of OTC NSAID users had a warning or contraindication for use of these drugs or used concurrent interacting medication. (6,8). Therefore, the purpose of this study was to evaluate the prevalence of NSAID drugs used among nurses in Ibn-Sina Hospital- Coast Hadhramout - Yemen

Material and Methods:

Study design: This was a descriptive cross-sectional study of the prevalence of NSAIDs used among nurses in Ibn-Sina Hospital- Coast Hadhramout - Yemen (March–May) 2020.

The study was conducted as a survey using questionnaire methods to explore the prevalence of NSAIDs used among nursing in

Ibn-Sina Hospital- Coast Hadhramout - Yemen (March–May) 2020.

Study area: This study will carried out between nurses in Ibn Sina Hospital in AL-Muklla district in Coast Hadhramout Government, Republic of Yemen during the period (March–May) 2020.

Sample size and methods : Stratified random sampling are the method of selection sample, to ensure that all nursing in Ibn -Sina Hospital is included in the study sampling. The sample was randomly chosen 130 nurses who worked in the hospital from a total of them which were 198 nurses (March-May) 2020

To do this research we need to know the sample size which is calculated

by the following equation: -

$$ss=Z^2 *(p)*(1-p)/c^2$$

Where:

ss=size of the sample

Z=confidence level when 95 = 1.96% as tabled.

P=expected proportion

C=margin of error at 5% (standard value of 0.05) =confidence interval.

$$SS= (1.96)^2 *198 (1-198)/ (0.05)^2$$

$$SS= 60 \text{ nurses}$$

So, we estimated a sample size of approximately for an assumed prevalence of NSAIDs self-medication used and prescribed patients among nurses with drugs of 50%, a 95% confidence level, and a 5% margin of error.

Data collection : The data will be collected from different ages of female and male nurses in Ibn-Sina Hospital during the end quarter of 2020. A self-administrated questionnaire was designed, which included the following:

- ❖ The personal data (age, sex, level of education and level of experience)

- ❖ To assess nursing support for the used and prescribed NSAIDs. (self-medication or prescription)
- ❖ To evaluate the prevalence of NSAIDs used and prescribed among nurses.
- ❖ To identify the route of NSAIDs administration prescription to patients and self-medication among nurses.
- ❖ To assess the main sources of knowledge information on NSAIDs among Ibn-Sina nurses.
- ❖ To recognize the main NSAIDs taken by nurses and prescribed to patients.
- ❖ To identify the main reason for NSAIDs are used or prescribed by nursing

Data analysis: The data will be coded and analyzed by statistical package for the social sciences (SPSS version 19) to ensure the accuracy of data such as frequencies and percentages were calculated and presented in tables and graphs by using computer office programs (word and Excel Office 2010).

Ethical Consideration: Approval of the project will be obtained from nursing college management and we took a letter to Ibn-Sina hospital management to facilitate our work and data collection. So, participants will be informed about the research including the objectives and ensuring confidentiality those are agree to participate will be enrolled in the study, and that information will be taken in secrecy and will be used just for the research objective and for the benefit of the community.

Results:

A hundred and thirty respondents were approached for participation. All of them provided complete information. The demographic characteristics of the respondents are presented in **Table (1)** In

our study, most of the participants were **males (57%)**, and (43%) were female , On the Other hand, the majority percentage of the age was between (25-35) years (**75 %**,). But according to the level of education, the Higher diploma was the higher percentage (**54 %**). On the Other hand, the majority percentage of Experience years was under 5 years (62%) .

Prevalence of supporting the use and prescription of NSAIDs. by nurses in Ibn-Sina Hospital, **Figure (1)** shows that (91%) reported disagreeing support taking NSAIDs.or prescribed it, while 8% reported that they supported taking NSAIDs.or prescribed it to patients.

Table (2) shows that the majority percentage of the prevalence of NSAIDs used as self-medication was rarely (36%) NSAIDs used (self-medication), but (37.6%) NSAIDs prescribed to patients. On the other hand, (82.3%) was the highest percentage, orally was the route of NSAIDs administration using (self-medication) and, injection (40.7%) was the highest percentage of the rout administration of NSAIDs prescribed to the patients

Figure (2) shows that the most common source of updated knowledge about NSAID information among nurses in Ibn-Sina in Coast Hadhramout government was a study (61%) and from the internet (33%) but the least source of information about NSAIDs reported by the participants was courses representing only (12%).

Diclofenac 50 mg drugs (85%) and (66%) was the most commonly NSAIDs used and prescribed among nursing in Ibn-

Sina in Coast Hadhramout government followed by Ibuprofen (58 %), (54 %) for NSAIDs self-medication and NSAIDs prescribed to patients among respondents shows in **figure (3)**

Finally, from our study, we reported that the main reasons for NSAIDs self-

medication was toothache (65%) and NSAIDs prescribed to patients was musculoskeletal disorder (65%) among respondent. All reasons for NSAIDs self-medication and NSAIDs prescribed to patients among nurses in Ibn-Sina in the Coast Hadhramout government are summarized in **Figure (4).**

Table (1): Socio-demographic characteristics of participants.

	Limits	Total respondents	
		Number of cases	Percentage
Age Range(Years)	25-35 years	98	75%
	36-45 years	24	18%
	>45 years	8	6%
Gender	Female	56	43%
	Male	74	57%
Education level	Diploma of Nursing	70	54%
	Bachelor of Nursing	60	46%
Experience level	< 5 years	80	62%
	5-9 years	29	22%
	1-15 years	10	7.5%
	>10 years	11	8.5%

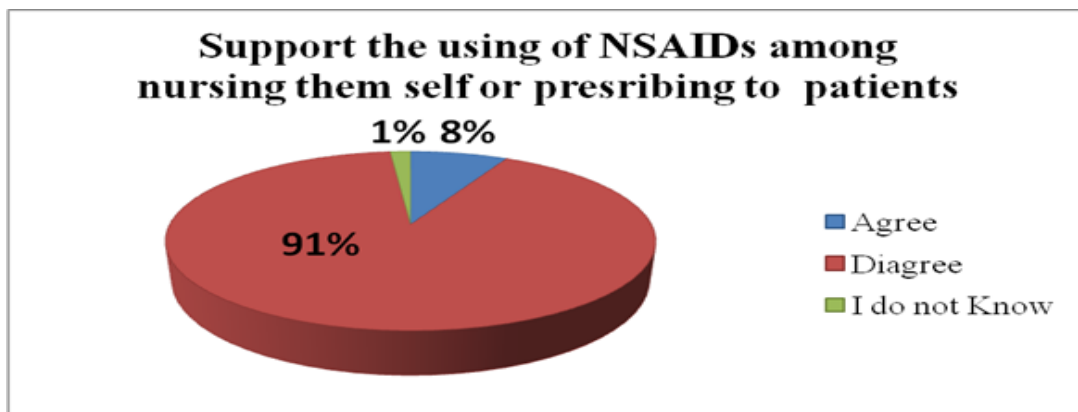


Figure (1): Nursing Support the use and prescription of NSAIDs.

Table (2): Prevalence of using and prescribing NSAIDs and route of administration among nursing

Prevalence of using and prescribing NSAIDs among nursing	Yes		No		Rarely	
	Freq.	%	Freq	%	Freq.	%
Using NSAIDs by nursing themselves.	44	34	39	30	47	36
Prescribing of NSAIDs by nursing to patients	49	37.6	41	31.5	40	30/7
Prevalence of rout NSAIDs administration use and prescribing among nursing	Freq.	Self – medications %	Freq	Prescribed to patients %		
Oral	107	82.3	75	57.6		
Injection	22	17	53	40;7		
Topical(local)	1	0.8	2	1.5		

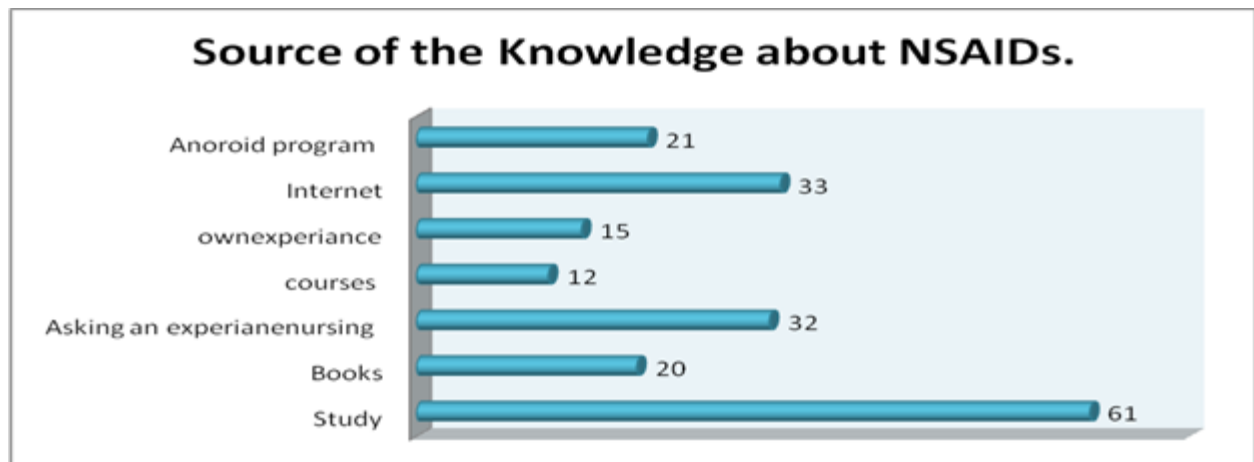


Figure (2): Source of the knowledge about NSAIDs .among Ibn-Sina nursing

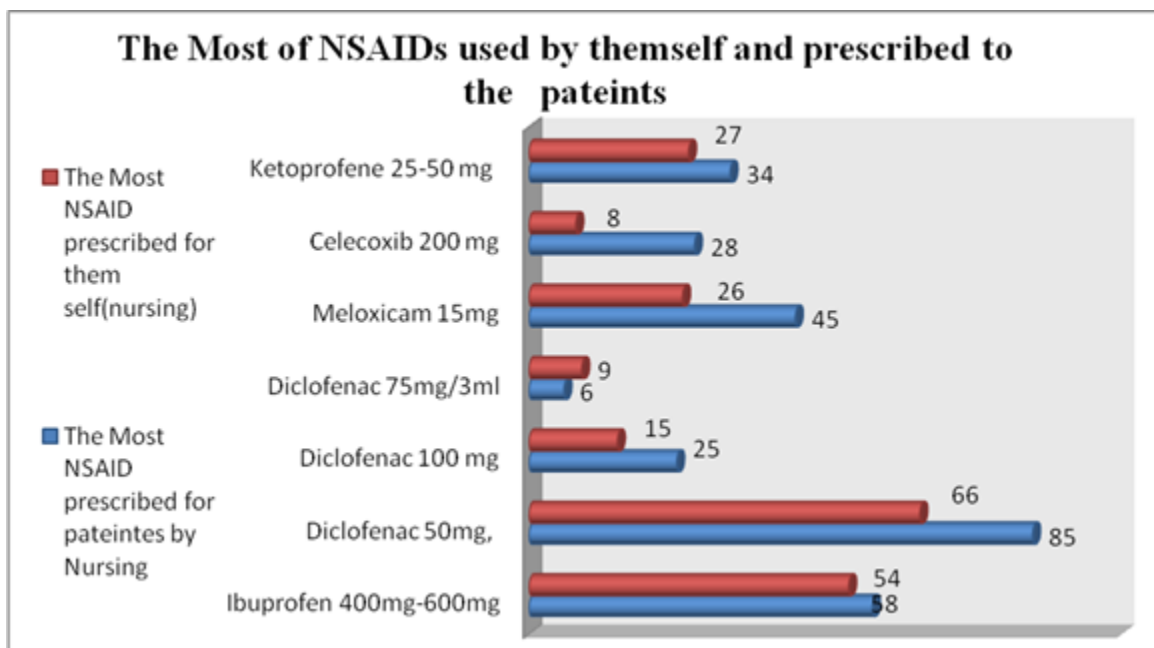


Figure (3): The most of NSAIDs used by nursing and prescribed to patients

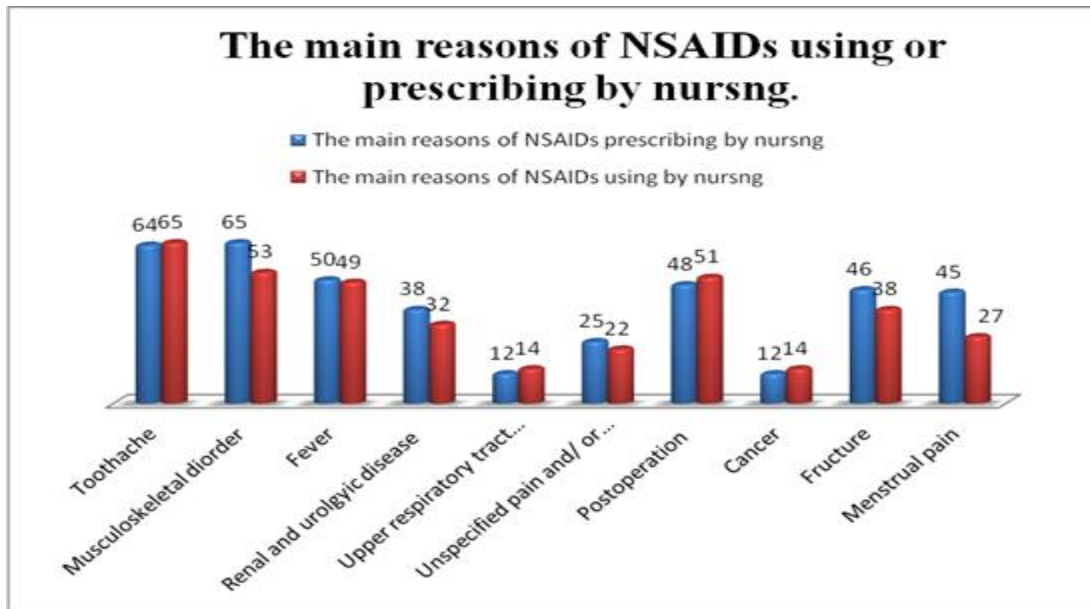


Figure (4): The main reasons of NSAIDs used or prescribed by nursing

Discussion:

Non-steroid anti-inflammatory drugs (NSAIDs) are a widely used therapeutic group in the world. This holds true for both prescription regimes and self-medication. (1). Culturally, there is a notion of safety or low risk regarding these drugs, leading to widespread use of these medications for common clinical situations such as fever, headaches, dysmenorrhea, acute pains, and/or chronic musculoskeletal conditions. (10,11).

Many articles have described the prevalence of NSAIDs. In our study the results showed that NSAIDs self-medication use and prescribe to patients were prevalent in various which the highest percentage of age groups is (25-35) years (75 %), gender is males (57%), education level is higher diploma (54%) and experience years is under 5 years (62%). The prevalence of NSAIDs self-medication use and prescribed support among nurses in Ibn-Sina Hospital, (8%) that be supported to self-

medication use or prescribed NSAIDs without prescribed, while (91%) reported that not be supported to self-medication use and prescribe NSAIDs without prescribed. On the other hand, the majority percentage of NSAIDs self-medication use are rarely (36%) (37.6%) NSAIDs prescribed to patients. This finding is similar to a study done by USA study (Wilcox CM et) (2005) showed the respondents used NSAIDs, with 38% using both prescription and OTC. Forty-six percent of exclusive OTC users believed OTC were safer, while 56% of exclusive users of prescription NSAIDs believed they were safe Another study observed NSAID use was higher among females and those aged above 30 years compared to their younger counterparts (12).

The most common source of update knowledge about NSAIDs information among nursing in Ibn-Sina in Coast Hadhramout government was studying (61%) and from the internet was (33%) but the least source of information about NSAIDs reported by the participants was

courses representing only (12 This result agrees with study by Green M. et (2016). in Canada reported that education the main source of NASIDs knowledge .(13)

Diclofenac 50 mg drugs (85%) and (66%) was the most commonly NSAIDs used and prescribed among nursing in Ibn-Sina in Coast Hadhramout government followed by Ibuprofen (58 %), (54 %) for NSAIDs self-medication and NSAIDs prescribed to patients among respondents. This result disagrees with a study by Al-Shidhani .A. et (2015). In Oman reported that Ibuprofen (46 %) is the most commonly NSAIDs used and prescribed. (9) Finally, from our study, we find that the main reasons for NSAIDs' self-medication use was toothache (65%) and NSAIDs prescribed to patients was musculoskeletal disorder (65%) among respondents. This finding is similar to NSAIDs prescribed to patients but disagrees with the main reason for NSAIDs self-medication use was a musculoskeletal disorder done by Portugal study (Ana P. et) (2015). (14)

Conclusions:

The present study indicates that the use of nonsteroidal anti-inflammatory drugs (NSAIDs) for nurses (self-medication) and their description of patients was widely practiced at Ibn-Sina Hospital. It is therefore in urgent need to make them aware of the pros and cons in order to ensure the safe use of medicines.

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