

Research Article

Assessment of Knowledge, Attitude and Practice of Pharmacovigilance and Adverse Drug Reaction (ADR) Reporting Among Healthcare Professionals in Somalia-Turkey Training and Research Hospital

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Abstract

Adverse Drug Reaction (ADR) remains one of major causes of morbidity and mortality [1]. Proper monitoring of adverse reaction is necessary. It is important for health care professionals to know how and where to report an ADR. In order to enhance the reporting rate, it is important to improve the Knowledge, Attitude and Practices (KAP) of the health care professionals with regards to the ADR reporting and the Pharmacovigilance. The study was conducted at Somalia-Turkey training and research hospital which is the largest hospital in capital city of Somalia, Mogadishu. The study design was cross-sectional using questionnaire; the study contained all healthcare professionals (physicians, nurses, and pharmacists) in the hospital who gave their consent. The questionnaire consisted of questions on socio-demographic characteristics of the study participants (Table 1) in first section and multiple-choice questions to assess knowledge of healthcare professionals towards Pharmacovigilance in second section. (Table 2) One point was given for each correct answer and zero points for each incorrect answer. The third section assessed the attitudes and practices of healthcare professionals towards Pharmacovigilance.

Keywords: Adverse Drug Reaction Reporting; Attitude; Healthcare Professionals; Knowledge; Pharmacovigilance; Practice

Introduction

Adverse Drug Reaction (ADR) remains one of major causes of morbidity and mortality [1]. Proper monitoring of adverse reaction is necessary. It is important for healthcare professionals to know where and how to report an ADR. It is important to improve the Knowledge, Attitude and Practices (KAP) of the healthcare professionals regards to the ADR reporting and the Pharmacovigilance. In order to enhance the reporting rate. Physicians, pharmacist and nurses have responsibility in reporting Adverse Drug Reaction (ADR). ADR is underreported in developing countries. Since no study evaluated the KAP of Pharmacovigilance among healthcare professionals in Somalia we carried out a cross-sectional based

study to evaluate knowledge, attitude, and practice aspects of Pharmacovigilance and ADR reporting among healthcare professionals in the Somalia-Turkey training and research hospital the largest hospital in Somalia. A total of 100 questionnaires about KAP toward Pharmacovigilance and ADRs were developed and distributed. WHO defines adverse drug reaction as an: "Any response to a drug which is noxious and unintended, and which occurs at doses normally used in man for prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function" [2].

The first WHO Collaborating Centre to be established for Pharmacovigilance was the Uppsala Monitoring Centre (UMC). The principal function of the Uppsala Monitoring Centre is to manage the international database of ADR reports received from National Centres [3] of Pharmacovigilance importance include 1) Drug monitoring 2) Pharmaceutical preparations - adverse effects 3) Adverse drug reaction reporting 4) Product surveillance,

Post marketing 5) Legislation, Drug I. Series(6) The aims of this study was to evaluate knowledge, attitude, and practice aspects of adverse drug reaction reporting and Pharmacovigilance among healthcare professionals in the Somalia-Turkey training and research hospital.

Materials and Methods

The study was carried out at Somalia-Turkey training and research hospital which is the largest hospital in capital of Somalia Mogadishu. The study design cross-sectional using questionnaire and the study included all health care professionals (Physicians, nurses, and pharmacists) in the hospital who gave their consent. The questionnaire consisted of questions on socio-demographic characteristics of the participants (Table 1) in the first section and 11 multiple-choice questions to assess knowledge of healthcare professionals towards Pharmacovigilance in second section (Table 2).

Percentage	Frequency	Sex
44.40%	36	Male
55.50%	45	Female
Professional Status		
6.17%	5	Pharmacist
38.20%	31	Nurse
7.40%	6	Laboratory Technician
20.90%	17	Postgraduate Student
14.80%	12	Undergraduate Student
12.30%	10	Physician
Marital Status		
46.90%	38	Single
8.64%	7	Divorced
44.44%	36	Married
Nationality		
82.70%	67	Somali
17.20%	14	Turkish

Table 1: Demographic Characteristics of respondents.

Knowledge related questions	Correct response (%)	Incorrect response (%)
Define Pharmacovigilance	54%	46%
Define adverse drug reaction	46%	54%
Do you know about Pharmacovigilance	Yes	82%
		18%
Where the international center for adverse drug reaction monitoring is located?	Sweden*	8.10%
	America	71.40%
	Canada	18.36%

Is the any center of ADR reporting system in Somalia	Yes	38.40%
	No*	57.60%
Which adverse drug reactions should be reported?	All serious adverse drug reactions	40.80%
	Adverse drug reactions to herbal and non-allopathic drugs	4%
	Adverse drug reactions to new drugs	12%
	Adverse drug reactions to vaccines	6%
	Unknown Adverse drug reactions to old drugs	4%
	All of the above	32.60%
Pharmacovigilance includes	Drug related problem	35%
	Medical devices and vaccines	9.80%
	Herbal products	9.80%
	All of the above*	45%
The purpose of Pharmacovigilance	To enhance patient safety in relation to use of drugs	40.40%
	To identify predisposing factors to adverse drug reactions	31.90%
	To identify unrecognized adverse drug reactions	14.80%
	To calculate incidence of adverse drug reactions	12.70%

Table 2: Knowledge of healthcare professionals.

One point was given for each correct answer and zero points for each incorrect answer. The third section assessed the attitudes and practices of healthcare professionals towards Pharmacovigilance. (Table 3,4). The independent variables included in the data analysis were age, sex, marital status, and Professional status. There were three main outcome variables, namely, knowledge of healthcare workers towards Pharmacovigilance, attitude of the healthcare workers towards Pharmacovigilance, and practice of the healthcare workers towards Pharmacovigilance.

Pharmacovigilance reporting should be	Voluntary*	27%
	Compulsory	72.90%
Do you agree with establishing Pharmacovigilance monitoring center in your institution:	Yes	79.60%
	No	28.60%

Should Pharmacovigilance be taught in detail to health care practitioners	Yes	82.90%
	No	17.10%

Table 3: Attitude of healthcare practitioners towards pharmacovigilance.

Questions	Options	Percentage
Have you ever reported an adverse drug reaction?	Yes	65.7%
	No	34.3%
Have you ever experienced an adverse drug reaction during clinical practices	Yes	70.2%
	No	29.7%
Number of identified adverse drug reaction in patients	<5	32%
	5-10	48%
	>10	20%
What are the factors discouraged you from taking part in Pharmacovigilance programs?	Don't know how and where to report	25%
	Managing patient is more important	41.6%
	Lack of time to report	22%
	Other (please specify)	11.11%

Table 4: Practice of healthcare practitioners towards pharmacovigilance.

81 out of 100 distributed questionnaires were completed with a response rate of (81%). 18 out of 81 (22%) did not know about the term pharmacovigilance, only 54% correctly defined pharmacovigilance and only 46% correctly defined adverse drug reaction, only 8.1% were aware about the location of international center for adverse drug reaction monitoring, (57.6%) agreed that there is no center for adverse drug reaction monitoring in Somalia, the knowledge level about pharmacovigilance considered to be poor in this study. Attitude: 82.9% were agreed that pharmacovigilance should be taught in detail to health care practitioners, only 27% were willing to report adverse drug reaction voluntarily, Most of subjects (79.6%) agreed with establishment of pharmacovigilance monitoring centre in their working institutions, The majority of them (41.6%) believe that Managing patient is more important, 65.7% ever reported an adverse drug reaction, (70.2%) experienced an adverse drug reaction during their clinical practices.

Results

There was a poor knowledge of Pharmacovigilance among healthcare professionals, only 54% defined Pharmacovigilance correctly and only 8.1% knew about the correct international center of Pharmacovigilance, 57.6% said there is a center of Pharmacovigilance in Somalia, attitude of healthcare professionals was moderate, only 27% correctly responded about that Pharmacovigilance reporting is voluntary, 79.6% agreed with establishing Pharmacovigilance monitoring center in their institution, and 82.9%

agreed with teaching Pharmacovigilance in detail to health care practitioners, the practice of healthcare practitioners towards Pharmacovigilance was moderate, 65.7% ever reported an adverse drug reaction, and 70.2% experienced an adverse drug reaction during clinical practices, 41.6% agreed that managing patient is more important than reporting and adverse drug reaction while 25% did not know where and how to report an adverse drug reaction.

Discussion

This is the first study in Somalia that evaluated knowledge of healthcare professionals towards Pharmacovigilance. A study conducted in a teaching hospital in south India showed that knowledge score was higher than this study [4]. Another study conducted in a tertiary care hospital in Gujarat showed that KAP of postgraduate students towards Pharmacovigilance was poor [5]. Another study in Kuwait showed that KAP of pharmacists working in secondary and tertiary hospitals towards Pharmacovigilance was good [6].

Strengths and limitations of the study

To our knowledge there is no study in Somalia that assessed the KAP of Pharmacovigilance among healthcare professionals. And our study included in addition doctors, pharmacists and nurses because among healthcare providers, nurses and pharmacist are in a unique position to report and monitor adverse drug reactions. The limitation of this study was the small number of participants.

Ethical approval: The study protocol was approved by the institutional review board of our institution.

Conclusion

This study showed that knowledge of healthcare professionals towards Pharmacovigilance was poor. Majority of respondents agreed that reporting of adverse drug reaction is necessary, there is no gap between adverse drug reaction reported (65.7) and experienced (70.2) in this study.

References

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