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Knowledge and Attitudes and behavior of Doctors towards Asthmatic patients in Port Sudan

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Abstract

Background: Bronchial asthma represent a real global medical problem that extend beyond the patient to affect family psychotically and financially and it consume a considerable percentage of resources, therefore a lot of effort done to treat and control asthma and several guidelines published but still education represent the corner stone in controlling asthma and the doctors are essential partners of education.

Objectives: To assess the knowledge, attitudes and behavior of Doctors towards asthmatic patients in Port Sudan.

Methods: A descriptive, cross-sectional facility-based study conducted in Port Sudan targeting the physicians in Port Sudan teaching hospital, outpatient clinics, private hospital and health centers.

Results: 50 physicians were enrolled in this study, 56% were general practitioner, 38% house officers and 6% were consultant. 86% of the physicians that participated in this study assessed asthma patients according to the guidelines. In 60% of those who follow guidelines; Sudan asthma guidelines were the reference of asthma management in those who follow the guidelines and most of them spend a suitable time with asthma patient.

Conclusion: most doctors who enrolled in this study are well-versed in asthma guidelines. The asthma control criteria and referral criteria, giving their patient suitable time the thing that reflect in prognosis and outcome.

Keywords: Asthma, Guideline, Doctors, Attitude, Knowledge

1. Introduction

Asthma is a heterogeneous chronic respiratory disease that is characterized by the recurrent symptoms of wheeze, cough, chest tightness, and shortness of breath. These symptoms are usually connected to reversible airflow obstruction that resolved on their own or with treatment^[1]. Chronic asthma is a respiratory condition that significantly affects patients and has a substantial socioeconomic burden worldwide. In order to effectively manage asthma, health care professionals must possess the necessary knowledge^[2]. A lot of guidelines discussing asthma diagnosis and management. All of these guidelines recommend some combination of symptoms and subjective test such as spirometry, bronchodilator reversibility (BDR) testing, and measurements of peak flow variability, and doctors are responsible to implement these guidelines; so doctors should be knowledgeable about asthma guidelines^[3].

Doctors should have guideline based knowledge of asthma care criteria which are, minimal or nonexistent symptoms, no activity limitations, optimal pulmonary function, and minimal or nonexistent side effects from treatment are important markers of successful asthma control. It is thought that issues with adherence to prescribed treatments and insufficient or suboptimal treatment are the primary causes of poor asthma control^[4].

The symptoms, severity, and phenotypes of asthma vary. Obesity, smoking, and allergic rhinitis are known risk factors for asthma and inadequate asthma management. The range of symptoms is mild coughing and sputum production to severe exacerbations, breathlessness due to airway obstruction, and even death^[5].

Numerous environmental and personal factors, including gender, rhinitis, obesity, and a history of early lung infections, are linked to asthma. Asthma is thought to be the cause of about 200,000 premature deaths annually, with low- and middle-income nations accounting for more than 80% of these deaths^[6]. Janson's research in the United States revealed that a sizable portion of medical professionals were ignorant of the pathophysiology and available treatment options for asthma. There were

variations in knowledge and practice in Europe, but in Taiwan, there was a notable disparity in the knowledge exhibited by various medical specialties. A significant number of doctors in Ghana and other African nations have inadequate knowledge and practice^[2].

The availability of emergency medical personnel who are trained and experienced must precede the availability of emergency medications and equipment in any primary healthcare setting. Rural doctors may have to do more for a critically ill patient than simply stabilize them. For this reason, these locations need access to medications and equipment needed for long-term resuscitation, especially in cases involving children. These medications and equipment primarily consist of oxygen, ventolin, atrovent and adrenalin S.c for management of status asthmaticus^[7]. Patients with severe asthma bear a disproportionately large burden on medical services. In order to enable individualized and targeted care, a large number of patients must be evaluated by physicians due to the heterogeneity of the severe asthma population in order to comprehend the clinical characteristics and outcomes of severe asthma^[8]. In order to lower the risk and frequency of asthma exacerbations, guidelines emphasize the value of utilizing preventative therapies. Long-acting β_2 -agonists (LABA) and inhaled corticosteroids (ICS) are two maintenance controller therapies that can lower the frequency of exacerbations in patients with mild-to-moderate asthma. However, despite intensive therapy with ICS/LABA for at least 4 months per year, a 5-year study has shown that exacerbation frequency remains relatively unchanged in patients with severe asthma and persistent symptoms^[9].

2. Objectives

2.1 General Objective

To assess the knowledge, Attitudes and behavior of Doctors towards Asthmatic patients in Port Sudan.

2.2 Specific objectives

- To identify the attitude of doctors towards asthmatic patients.
- To identify the gaps in physicians knowledge and practice concerning management of asthma.
- To explore physicians educational roll in patient's awareness about asthma.

3. Materials and methods

3.1 Study design

A descriptive, cross-sectional facility-based study.

3.2 Study setting

The study was conducted at Port Sudan which is a city and port on the Red Sea in eastern Sudan, and the capital of Red Sea State. Port Sudan is Sudan's main seaport and the source of 90% of the country's international trade. The population of Port Sudan was estimated in the 2008 Census of Sudan to be 394,561 people.

3.3 Study population

The physicians in Port Sudan teaching hospital, outpatient clinics, privet hospitals, health centers and all physicians that located in Red Sea locality.

3.3.1 Inclusion criteria

All medical physicians (males and females) at Red Sea locality were included.

3.3.2 Exclusion criteria

Who refuse to be included in the study.

3.4 Sampling technique and sample size

3.4.1 Sampling technique

Total coverage sampling technique was implemented to recruit the students to participate in this study.

3.4.2 Sample size

Sample size was all the physicians that could be reached in the duration of the study {50 physicians}.

3.5 Data collection tool

Structured questionnaire with closed ended questions was created by Google form and the link shared on social media {what's app, telegram} among the medical physicians.

Using self-administered questionnaire. The questionnaire used is a questionnaire used by a similar study. The questionnaire was tested before starting the data collection.

The questionnaire contain a question which asks them to consent to participate in the study before granted access. Those who do not consent will not have access to the survey. All participants were made aware that this study is for research purposes only and their participation was voluntary. They were not asked for their names, e-mail address, or contact information, ensuring the privacy of survey respondents.

3.6 Data management and analysis

3.6.1 Data storage

All data collection forms were kept in a secure setting, only available to the principal investigator.

3.6.2 Data Analysis

The collected data which retrieved from the online survey was exported into Microsoft Excel and then imported into the Statistical Package for Social Sciences (SPSS) version 25. Descriptive percentage was presented in tables & figures. Chi-square test was used to assess the significant association.

3.7 Ethical Conciliation

The questionnaire contain a question which asks the physicians to consent to participate in the study before granted access. Those who do not consent will not have access to the survey. All participants were made aware that this study is for research purposes only and their participation was voluntary. They were not asked for their names, e-mail address, or contact information, ensuring the privacy of survey respondents.

Ethical approval will be obtained from Scientific Research Committee at Faculty of Medicine at Red Sea University.

Each participate was clearly informed about the objective of the study and a consent was taken. If the participants accepted to participate, he/she can start filling the questionnaire. The physicians were informed on the right to withdraw from the research at any time they may wish and also not response to fill the questionnaire, so their confidentiality was insured by the use anonymous questionnaire and they were also informed that the data collected from them will not be used for any other purpose than the research objective.

3.8 Strengths and limitations

The closure of the university in Sudan makes it hard to reach the physicians directly to ask them to fill the questionnaire

also the internet services were done in many location in Sudan make it hard to contact the physician online.

4. Result

4.1 Position of the participants

Out of 50 physician, most of the participants 56% were general practitioner while only 6% were consultant.

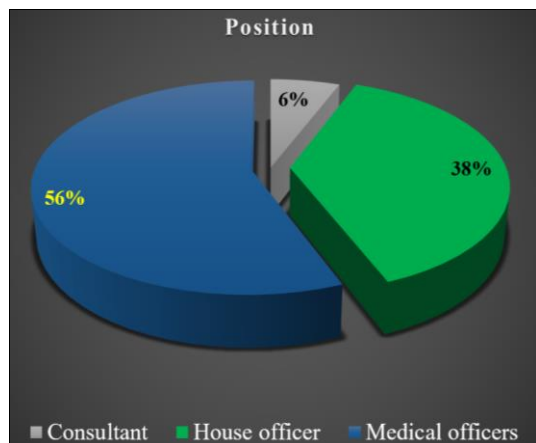


Fig 1: Shows the position of the participants in their facilities

4.2 Patient assessment by the physicians

96% of the participants did follow asthma patients, 48%

took 15 min with them, 88% take enough medical history from them, while the rest took 10 min & 30 min 28%, 24% respectively.

Table 1: Shows the patient assessment by the physicians

		Count	Valid N %
Did you follow patient of asthma?	Yes	48	96.0%
	No	2	4.0%
The time you take with the patients?	10min	14	28.0%
	15min	24	48.0%
	30min	12	24.0%
Did you take enough history from asthmatic patients?	Yes	44	88.0%
	No	6	12.0%

4.3 Attitude and practice towards asthma patients among the participants

86% of the physicians that participated in this study assessed asthma patients according to the guidelines. 82% of the Participants were updated about asthma guidelines & 94% followed them in management of asthma. In 60%, Sudan guidelines were the most source of asthma management in those who followed the guidelines, those who didn't follow them reported Facility of guideline not available as the reason for not following the guidelines. 70% of the physicians' effort to eliminate the cause of uncontrolled asthma, and 90% played a role in patients education about asthma.

Table 2: Shows the attitude and practice towards asthma patients among the participants

		Count	Valid N %
Did you assess asthma patients according to the guidelines?	Yes	43	86.0%
	No	7	14.0%
Did you ask about risk factor?	Yes	47	94.0%
	No	3	6.0%
Did you update about asthma guidelines?	Yes	41	82.0%
	No	9	18.0%
Did you follow guideline in management of asthma?	Yes	47	94.0%
	No	3	6.0%
If yes which source:	American guideline	2	4.0%
	British guideline	14	28.0%
	GINA guideline	1	2.0%
	Sudan guideline	30	60.0%
If No, why?	1/ guideline no suitable for our area	1	2.0%
	2/ Facility of guideline not available	2	4.0%
	3/I have no enough times	0	0.0%
Did you effort to eliminate the cause of uncontrolled asthma?	Yes	35	70.0%
	No	5	10.0%
Did you educate asthma patients?	Yes	45	90.0%
	No	5	10.0%

4.4 Knowledge of the physicians about asthma

92% of the participants knew the referral criteria of asthma, and 60% knew the asthma control test.

Table 3: Shows the Knowledge of the physicians about asthma

		Count	Valid N %
Did you Know referral criteria of asthma?	Yes	46	92.0%
	No	4	8.0%
Did you know asthma control criteria?	Yes	30	60.0%
	No	20	40.0%

5. Discussion

In Sudan the majority of asthmatic patients manage at primary care centers. To improved patient care, primary care doctors must be knowledgeable about the diagnosis and

treatment of Asthma. Out of 50 physician, 56% of the participants were general practitioner, while only 6% were consultant. Clinical diagnosis of asthma is based on physical examination and history [2]. 96% of the participants did follow asthma patients, 48% took 15 minute with them which is suitable time to take history, manage and educate the patient. While the rest took 10 minute which is not enough time, and 30 minute is very long time to spend with patient which is unlikely to be a real answer 86% of the physicians that participated in this study assessed asthma patients according to the guidelines, 94% asking about risk factors. 82% of Participants were updated about asthma guidelines & 94% followed them in management of asthma. Sudan guidelines were the most source of asthma management, 60% in those who followed the guidelines,

14% those who didn't follow them report that Facility of guideline not available as the primary reason for not following the guidelines, which is a significant percent that affect the outcome of asthma management, the things that need governmental intervention. Compared to study in Duke University Medical Center in Durham, North Carolina, which illustrate that the obstacle that make the doctors not following guideline was inadequate knowledge about asthma, ^[10]. Additionally, a study conducted in Greece discovered that a mere 23% of primary care physicians followed asthma guidelines when prescribing medication which is very low comparing to our study [25]. Same as this study 2% choosing GINA guidelines, the existence of the GINA guidelines was acknowledged by less than half of the participants in the Nigerian study, which could account for the variations in the respondents' varying levels of knowledge ^[2].

70% of the physicians' in this study make effort to eliminate the cause of uncontrolled asthma, 90% educate patients about asthma which played a role in controlling asthma, and so preserve the country resources. 92% of the participants knew the referral criteria of asthma and 60% asthma control criteria, which is give the patient suitable level of service.

6. Conclusion

Most of the doctors know guideline and most of them adhere to guideline, spend suitable time with the patient, and make effort to educate the patients which are lead to good asthma control and improving prognosis and outcome and preserved health resources.

7. References

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