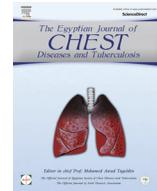




Contents lists available at ScienceDirect

**Egyptian Journal of Chest Diseases and Tuberculosis**journal homepage: [www.sciencedirect.com](http://www.sciencedirect.com)

# Assessment of bronchial asthma management among adult patients in Chest Department of Zagazig University Hospitals in the period (2011–2012)

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**ARTICLE INFO****Article history:**

Received 8 February 2017

Accepted 7 March 2017

Available online xxxx

**Keywords:**

Bronchial asthma

GINA guidelines

Sharkia Governorate

**ABSTRACT**

In some countries like Egypt and especially in Sharkia Governorate, many diseases may be managed by any general practitioner or other specialty other than the presumed one without following international guidelines and this may lead to over or under diagnosis and consequently over or under treatment and even occurrence of complications.

**Objectives:** The objective of this study is to assess patients who have been labelled as bronchial asthma regarding: a- how they were diagnosed, b- what treatment have been prescribed to them by their chest physicians and to assess if they follow GINA guidelines or not.

**Aim of the work:** Improve health status of patients and reduce complications from bronchial asthma.

**Patients and methods:** This study was carried out at Chest Department (outpatient sections), Zagazig University Hospital from September 2011 to September 2012 on 220 adult patients labelled and managed as bronchial asthma, 57 males and 163 females with an age range from 18 years old to 50 years old. Their diagnosis was reviewed if it is matched with GINA guidelines or not. Criteria of asthma diagnosis were reviewed through GINA guidelines (2008) [1].

**Results:** Only a low percentage (12.2%) of asthmatic patients was advised to do PEFR and spirometry. Corticosteroids and  $\beta_2$  agonist were prescribed to all bronchial asthma patients by their chest physicians. As regards antibiotics, they were prescribed to (88.1%), while mucolytics and expectorates were prescribed to (61.8%), and LTRA was described to (33.2%) of bronchial asthma patients. A high percentage (92.3%) of bronchial asthma patients were treated according to GINA guidelines.

**Conclusion:** There is a satisfactory implementation of local and international asthma management guidelines.

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**Introduction**

Asthma is a chronic inflammatory disorder of the airways where many cells and cellular elements play a role. The chronic inflammation is associated with airway hyper-responsiveness that causes recurrent episodes of breathlessness, wheezing, coughing, and chest tightness particularly at night or in the early morning. These episodes are usually associated with widespread airflow obstruction within the lung that is often reversible either spontaneously or with treatment. Furthermore, many of the symptoms

overlap with other diseases, e.g. chronic obstructive pulmonary disease (COPD). Consequently, asthma largely remains a clinical diagnosis supported by diagnostic testing [1].

The management of bronchial asthma is largely based on pharmacotherapy which relies more on the inhaled route, both to diminish the dose of applied drug and hence the risk of systemic side effects decreases, and to localise therapy to the target organ [2].

It was found that the majority of patients used drug regimens were not in compliance with the consensus guidelines. It is likely that many subjects are, in fact, undertreated. This is consistent with the findings of many studies and is supported by finding that many patients required their short-acting bronchodilator daily [3,4].

Peer review under responsibility of The Egyptian Society of Chest Diseases and Tuberculosis.

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<http://dx.doi.org/10.1016/j.ejcdt.2017.03.003>

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Please cite this article in press as: R. Nafie et al., Assessment of bronchial asthma management among adult patients in Chest Department of Zagazig University Hospitals in the period (2011–2012), Egypt. J. Chest Dis. Tuberc. (2017), <http://dx.doi.org/10.1016/j.ejcdt.2017.03.003>

In general asthma undertreatment is more likely to put patients at risk rather than over treatment particularly if treatment is given as far as possible by the inhaled route which minimizes adverse reactions [5].

Many deaths and much unnecessary morbidity have been associated with overreliance on bronchodilator with underuse of inhaled and oral corticosteroid treatment and failure to make objective measurements of severity and with inadequate supervision. These recommendations promote greater use of inhaled anti-inflammatory drugs, even in patients with apparently mild asthma. Objective monitoring of progress based on the patient's own measurements of Peak expiratory flow rate where possible; and greater participation of the patient or parents in the management of the condition [6].

Clinical guidelines are designed to help practitioners and patients make decisions regarding the appropriate health care for specific circumstances [7]. Guidelines have existed for decades and hundreds have been published for many diseases [8] including asthma [9] and allergic rhinitis [10,11].

The goal of guidelines is their wide spread within the medical community to all health care professionals and patients in order to improve patients care [12].

The role of asthma guidelines is important but, the recent updates focus more on control than on severity due to a new understanding of the disease, [13–15].

In some countries like Egypt and specially in Sharkia Governorate, many diseases e.g. bronchial asthma, diabetes mellitus, hypertension, etc. may be managed by any general practitioner or other specialty other than the presumed one without following international guidelines and this may lead to over or under diagnosis and consequently over or under treatment and even occurrence of complications. Also it is observed that some chest physicians don't follow international guidelines in managing bronchial asthma patients.

#### *Research question*

Are patients of bronchial asthma had been managed by their chest physicians with Global Initiative for Asthma (GINA) guidelines?

#### *Aim of the work*

Improve health status of patients and reduce complications from bronchial asthma.

#### *Objectives*

The objective of this study is to assess patients who have been labelled as bronchial asthma regarding: a- how they were diagnosed, b- what treatment have been prescribed to them by their chest physicians and to assess if they follow GINA guidelines or not.

#### **Patients and methods**

This study was carried out at Chest Department (outpatient sections), Zagazig University Hospital from September 2011 to September 2012 on 220 adult patients labelled and managed as bronchial asthma, 57 males and 163 females with an age range from 18 years old to 50 years old.

Those patients were selected from the attendants at the outpatient chest clinic and Ministerial decisions clinic for treating patients, Chest Department, Zagazig University Hospital.

#### *Methods*

All selected patients were subjected to the following:

Their diagnosis was reviewed if it is matched with GINA guidelines or not by a constructed questionnaire quoted from Attia (1997) [16] including asking them about:

1. Personal history.
2. Chest complaint.
3. Past history.
4. Family history of bronchial asthma or atopic disease.
5. Associated medical problems.
6. Examination done to them by their chest physicians.
7. Chest X-ray.
8. Pulmonary functions (spirometry and/or peak expiratory flow) done to them by their chest physicians.
9. Drugs (including bronchodilators and anti-inflammatory drugs for asthma) that were prescribed and their side effects.
10. Frequency of their asthma related hospital admissions during the past 12 months.
11. Patient education.
12. Assessment of patient's compliance with asthma medication was done by **The Asthma Control Questionnaire (ACQ)**: a validated six-item questionnaire to assess asthma control over the past week. Items address:
  - a) How frequently were the patients woken by their asthma.
  - b) How bad were their symptoms when they woke up.
  - c) How limited were they in their activities.
  - d) How much shortness of breath they had.
  - e) How much of the time they wheezed.
  - f) The average number of puffs of short-acting bronchodilator they used each day. Patients respond to each item on a 7 point scale (0–6) and a mean score is calculated. Patients with a mean score of >1.5 were considered to have poorly controlled asthma [17].

#### **Criteria of asthma diagnosis were reviewed through GINA guidelines (2008) [1]**

#### *Medical history*

- A clinical diagnosis of asthma is often prompted by episodic attacks of breathlessness, chest tightness, wheezing, and cough.
- Episodic symptoms with the following are also helpful diagnostic guides:
  1. Positive family history of asthma.
  2. Atopic diseases.
  3. Allergen exposure.
  4. Seasonal variability of symptoms.
  5. Worsening at night.
  6. Responding to appropriate asthma therapy.

#### *Physical examination*

The most usual abnormal physical finding is wheezing on auscultation, a finding that confirms the presence of airflow limitation. However, in some people with asthma, wheezing may be absent or detected only when the person exhales forcibly, even in the presence of significant airflow limitation.

#### *Diagnostic tools*

- Measurements of lung function.
- Measurements of lung function provides:
  1. Reversibility.
  2. Variability.

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