

Original Research Article

Impact of allergic rhinitis on quality of life and main risk factor: a study in Jazan region

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ABSTRACT

Background: Allergic rhinitis is a common inflammatory disorder that affects the upper respiratory tract. It affects about one-third of the world's population. The prevalence of rhinitis varies greatly in various countries and also in various parts of the same country. With this disease, the quality of life which includes sleep disturbances, fatigue, diminished memory, depression is decreased because of the direct impact on the life of the patient.

Methods: The present cross-sectional study was conducted on patients over the age of 18 years old who suffered from symptoms of allergic rhinitis between 1 March 2021 to 30 March 2021 in Jizan region

Patients were answered for questionnaires that sent for them online through social media.

Results: A total of 37 participants enrolled. According to the ARIA guidelines, patients were divided into four groups: a moderate to severe intermittent group that comprised the majority of the patients 38%, a mild intermittent group 19%, a moderate to severe permanent group 27%, and a mild permanent group 15%. Among the total of 37 patients, the quality of life was mildly affected in 35% and severely influenced in 65% patients.

Conclusions: In the patients studied in Saudi Arabia's southern area, allergic rhinitis can have a negative impact on sleep quality, mood, and daily activities.

Keywords: Allergic rhinitis, Quality of life, Saudi Arabia

INTRODUCTION

Allergic rhinitis (AR) is a common inflammatory disorder that affects the upper respiratory tract which often presents with at least one of the classic symptoms including sneezing, itching, nasal congestion and rhinorrhea.^{1,2} It affects about one-third of the world's population.³ The prevalence of rhinitis varies greatly in various countries and also in various parts of the same country.⁴ This disease develops due to elevated inflammatory cells such as neutrophil, eosinophil, basophil and mast cell as result of exposure to risk factors that leads to stimulation of mucous glands, vasodilatation

and increased vascular permeability that are responsible for creating typical symptoms such as itching, sneezing, rhinorrhea, and nasal congestion.^{5,6} This condition may be seasonal (caused by airborne pollens from trees, flowers and grasses) or perennial (caused by dust mite, molds and animal dander).⁷ With this disease, the quality of life which include Sleep disturbances, fatigue, diminished memory, depression is decreased because of the direct impact on the life of the patient.^{8,9} The quality of life of patients with allergic rhinitis determines their classification of rhinitis According to (allergic rhinitis impact on asthma) guidelines; for example, sleep

disturbances are only associated with the moderate to severe form of rhinitis and not with its mild form).¹⁰

Current study is aimed to determine the impact of allergic rhinitis on quality of life among Saudi population.

METHODS

The present cross-sectional study was conducted on patients over the age of 18 years old who suffered from symptoms of rhinitis such as nasal congestion, rhinorrhea, constant sneezing, and itchy nose between 1 March 2021 to 30 March 2021 in Jizan region. Patients were answered for questionnaires that sent for them online through social media. The QLQ contains items on the various aspects of quality of life and including gender, age, rhinoconjunctivitis symptoms, most bothering symptoms, risk factors, sleep disturbance, daily performance and genetic factor.

The mean score of each individual was calculated based on the answers to the QOL questionnaire. The participants were provided with all the necessary details on the questionnaires. All statistical analyses were performed using SPSS for windows software.

Inclusive criteria

Inclusion criterion for current study was all patients with allergic rhinitis.

Exclusion criteria

Patients with chronic sinusitis and fungal sinusitis were excluded from the study.

Sample technique

Random sampling technique was employed and patients were made to answer questionnaires through social media.

Statistical analysis

The mean score of each individual was calculated based on the answers to the QOL questionnaire. The participants were provided with all the necessary details on the questionnaires. All statistical analyses were performed using SPSS for windows software.

RESULTS

A total of 37 participants enrolled; 75% were male and 25% were female. Rhinorrhea was the most prevalent symptom among the participants. Other main symptoms of allergic rhinitis included nasal congestion and itchy eyes (30% and 8%, respectively). 13.5% of participants has concomitant decrease of smell. According to the ARIA guidelines, patients were divided into four groups: a moderate to severe intermittent group that comprised

the majority of the patients 38%, a mild intermittent group 19%, a moderate to severe permanent group 27%, and a mild permanent group 15%. Among the total of 37 patients, the quality of life was mildly affected in 35% and severely influenced in 65% patients.

The main risk factors for allergic rhinitis in jazan region of Saudi Arabia were dust 55.9%, perfumes 17.6%, dust mite 11.8% and others like animal, cleaners and grass less than 15%. In our study 62.9% of participants have family history of allergic rhinitis.

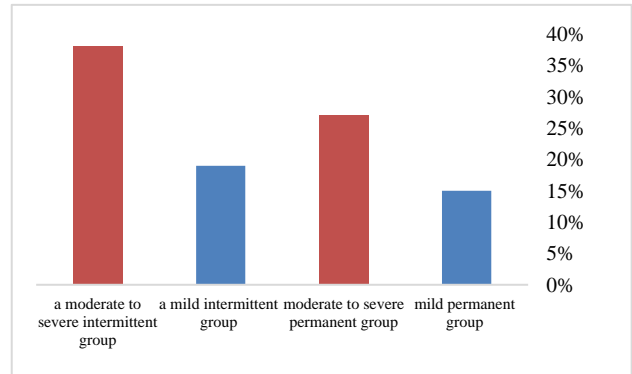


Figure 1: Distribution according to ARIA guidelines.

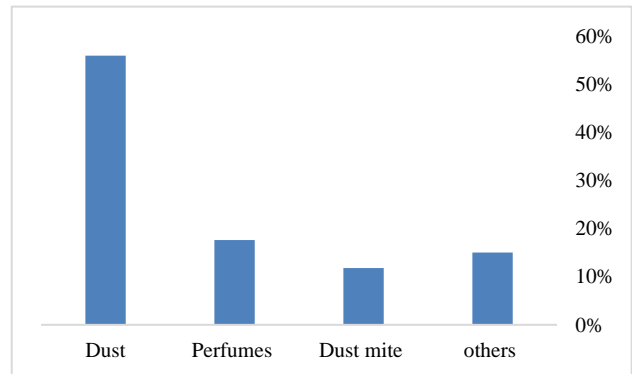


Figure 2: Risk factors for allergic rhinitis.

DISCUSSION

Allergic rhinitis is one of the most common allergic problems affecting 10-40% of the general population and its prevalence is increasing globally.¹ This condition may be seasonal (caused by airborne pollens from trees, flowers and grasses) or perennial (caused by dust mite, molds and animal dander). Rhinorrhea was the most prevalent symptom and dust was main risk factor among the participants that indicate seasonal allergy more than perennial in Jazan region.

The quality of life which includes sleep disturbances, fatigue, diminished memory, depression is decreased because of the direct impact on the life of the patient and determines their classification of rhinitis according to (allergic rhinitis impact on asthma) guidelines. Moderate to severe intermittent allergic rhinitis was found to be the

most frequent (38%) type of the disease in the study group. This is different from a study conducted by Valero et al. which reported the severe permanent type as the most frequent (26%) type.¹¹ The significant number of patients' quality of life was affected by problems caused by allergic rhinitis, including general sleep problems, morning symptoms, and practical problems during wake time, according to the findings of this study.

Limitations

Limitation of the current study was the small sample size of patients that were included in the study.

CONCLUSION

It was concluded through current study that in the patients in Jazan region, seasonal allergic rhinitis was more common and had a negative impact on sleep quality, mood, and daily activities and making an early diagnosis of the disease is the first step for overcoming and taking measures to prevent the incidence of concomitant diseases, such as sinusitis is essential.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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