



Contents lists available at ScienceDirect

International Journal of Pediatric Otorhinolaryngology

journal homepage: www.elsevier.com/locate/ijporl

Pattern of allergic rhinitis among children in Ekiti, Nigeria

Waheed Atilade Adegbiyi^a, Gabriel Toyé Olajide^{b,*}, Anthony Oyebanji Olajuyin^a,
Shuaib Kayode Aremu^b, Akanbi Ganiyu Olusola^c

^a ENT Department, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria^b ENT Department, Federal Teaching Hospital, Ido-Ekiti/Afe Babalola University Ado-Ekiti (ABUAD), Ekiti State, Nigeria^c Radiology Department, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria

ARTICLE INFO

Keywords:

Paediatric
Allergic rhinitis
Allergens
ARIA classification
Comorbid illnesses

ABSTRACT

Background: Allergic rhinitis is a chronic and recurrent nasal condition. It is often neglected in children with late presentation. This study aimed at determining the prevalence, sociodemographic features, comorbid illnesses, complications and quality of life in children with allergic rhinitis in the study institution.

Materials and methods: This is a prospective hospital based study of children with allergic rhinitis in Ekiti state university teaching hospital, Ado Ekiti. The study was carried out in ENT department over a period of two years (between June 2015 to May 2017). Informed consent was obtained from the parents/guardian/patients and consented patients were enrolled into the study. Data were obtained by pretested interviewers assisted questionnaire. Details of their history, physical examination and investigations were carried out and findings were documented. All data obtained were descriptively analysed using SPSS version 18.0 and presented in simple tables and charts. Ethical clearance was sought for and obtained from the ethical committee of the hospital.

Results: A total of 4341 patients were seen out of which 265 were children with allergic rhinitis. Prevalence of allergic rhinitis in children in this study was 6.1%. There were 63.0% males with male to female ratio of 2:1. Allergic rhinitis was peaked at preschool age group (1–5 years) accounted for 47.9%.

A total of 42.3% participants were living in urban setting while 57.7% were from rural setting. Majorities (40.4%) of the patients were in nursery and parent's major occupation was mainly farming in 27.2%.

There was positive family history of allergy in 54.7% patients. Perennial allergic rhinitis were noted in 63.8% patients while seasonal allergic rhinitis were noted in 36.2% patients. Major form of allergens was inhalant 81.8% and the least form of allergen was ingestant 5.7%.

The commonest identified trigger factors among the study population were as follows: dust, cold weather and smoke which were accounted for 59.6%, 37.4% and 18.9% of the study patients respectively. Other noted triggering factors were soap and perfume which accounted for 4.2% and 1.1% respectively.

Major associated comorbid illnesses among the patients were tonsils hypertrophy, adenoid hypertrophy and inferior turbinate hypertrophy which accounted for 55.5%, 46.4% and 40.4% respectively. Clinical presentations of allergic rhinitis in this study were mainly 75.8% nasal blockage, 65.3% runny nose and 8.5% recurrent sneezing.

Commonest complications of allergic rhinitis were 35.1% pharyngitis, 32.1% otitis media and 28.3% headache.

Treatment of allergic rhinitis leads to improvement on the clinical features in 90.1% patients. No significant improvement in clinical features were noticed in 9.8% patients. None of the studied patients reported worse clinical condition after treatment of allergic rhinitis. No mortality was recorded from allergic rhinitis in this study.

Conclusion: Allergic rhinitis affect all paediatric age group and there were delayed presentation in the participants. There were associated comorbid illnesses, complications and affectation of quality of life at presentation in majority of the patients.

* Corresponding author.

E-mail addresses: awagbiyi@yahoo.com (W.A. Adegbiyi), toycolajide@yahoo.co.uk (G.T. Olajide), oyebanjiolajuyin@yahoo.com (A.O. Olajuyin), Shuaib.aremu@gmail.com (S.K. Aremu), solz50@hotmail.com (A.G. Olusola).

<https://doi.org/10.1016/j.ijporl.2018.01.014>

Received 4 October 2017; Received in revised form 15 January 2018; Accepted 15 January 2018

Available online 02 February 2018

0165-5876/ © 2018 Elsevier B.V. All rights reserved.

1. Introduction

Allergic rhinitis happens when aeroallergens trigger the release of histamine in the nose and it results from nasal congestion, rhinorrhea, sneezing and itching. Symptoms in the eyes, ears and throat are frequently associated [1–5].

Majority of the available data in the literature has focused on adults with allergic rhinitis and very little data is available about prevalence, burden, quality of life, complications, effects and comorbidities in children especially in developing countries [6]. In an American survey, 61% of children were diagnosed with allergic rhinitis by 6 years of age, and most of these children were diagnosed by pediatricians [7–11]. Allergic rhinitis was previously classified as seasonal and/or perennial. New Allergic Rhinitis and Its Impact on Asthma (ARIA) classification system was designed to better classify the disorder and include the categories of intermittent and persistent allergic rhinitis [12–16]. In allergic rhinitis the allergens include house dust mites, grass pollen, tree pollen, cockroaches, rodents, weed pollens, cat, dog, and molds [17–21]. Nonallergic triggers such as weather, fumes, odours, and exercise were commonly reported [15,16]. Allergic rhinitis may be due to local IgE production in the nose if no allergen was identified [22–24]. The role of histamine in allergic diseases is well defined [25–27]. Histamine mediates its effects via an established set of histamine receptors. In the nose this results in sneezing, itching and rhinorrhea. Risk factors for pediatric allergic rhinitis include genetic predisposition, prenatal as well as early-life environmental exposures (infections, indoor and outdoor air pollution, tobacco smoke, and diet) at a critical time when the immune system is still undergoing development, atopy, high socioeconomic status, and positive family history [28,29].

Complications of allergic rhinitis include the following: acute or chronic sinusitis, otitis media, sleep disturbance or apnea, dental problems (overbite). Morbidity/mortality from allergic rhinitis is not a life-threatening unless it is accompanied by comorbid illnesses such as severe asthma or anaphylaxis, eczema, and food allergies.

There is increase in prevalence rate of allergic rhinitis in recent time. Despite this increment there is still paucity of literature on allergic rhinitis in the developing countries. This study aimed at determining prevalence, sociodemographic features, comorbid illnesses, complications and quality of life of patients with allergic rhinitis in the study institution.

2. Materials and methods

This is a prospective hospital based study of the patients with clinical diagnosis of allergic rhinitis in children seen, reviewed and managed in the Ear, Nose and Throat department of the Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria. This included all children aged 18 years and below at the time of this work. This tertiary health institution is the only state owned health facility serving over two millions populations in the state and 4 neighboring states of Ondo, Osun, Kogi and Kwara. The study was carried out over a period of two years (from June 2015 to May 2017). All consecutive patients who presented to the department were enrolled into the study. Informed consent was obtained from patients/guardian/parents before patients were enrolled into the study. Interviewer assisted questionnaire (pre-tested) were given to consented patients/parents/guardians to obtain detailed data on sociodemographic features of patients. Their detailed otorhinolaryngological history including their past medical, surgical and social history was also taken. Also history of allergens exposure and drugs usage were taken.

All the patients that were recruited into this study had detailed ENT examination done using endoscopes. Detailed nose, ear, throat, head and neck examination were done and documented. Detailed rhinological examination includes anterior rhinoscopy, nasal cavity and posterior rhinoscopy with nasoendoscopy. Oropharyngeal examination performed and findings were documented. General physical and

systemic examination was performed.

Limitations of this study include the absence of allergy testing and failure of estimating the measure of quality of life based on a standardized and validated (generic or disease-related) questionnaires.

Mucopurulent sino nasal discharge (specimen) was aseptically taken examined and sent for microscopy, culture, and sensitivity in case of any super imposed bacterial infection. Further investigations such as x ray, computerized tomographic (CT) scan of the paranasal sinuses were requested based on clinical findings.

All the patients were educated based on the findings on the line of management of allergic rhinitis. Treatment modalities were avoidance of allergens, antibiotic therapy (such as amoxicillin/clavulanic acid to treat superimposed infection), antihistamines, topical corticosteroids, systemic steroids and surgery (adenoidectomy with or without tonsillectomy) depending on clinical findings. Participants were followed up in the ear, nose and throat clinic for possible outcome and complications.

All data obtained were documented, collated and analysed. The data analysis was done by using SPSS version 18. The analyzed data were presented in simple descriptive tables and charts.

Ethical clearance was sought for and obtained from the ethical committee of the hospital.

3. Results

A total of 4341 patients were seen in the ENT department over the study period. There were 265 paediatric patients (characterised by rhinorrhoea, nasal obstruction, epiphora, and nasal and eye itching) enrolled into the study. Prevalence of allergic rhinitis in children in this study was 6.1%. Allergic rhinitis affects all the paediatric age group with a peak at preschool age group (1–5) years accounted for 47.9%. This was demonstrated in Fig. 1. There were 167 (63.0%) males 98 (37.0%) females with male to female ratio of 2:1. A total of 112 (42.3%) participants were living in urban setting while 153 (57.7%) were from rural setting. Majority (40.4%) of the patients were in nursery, 26.8% were in secondary school level while 9.4% are in post-secondary level of education. Parent's major occupation were mainly farming (27.2%), teaching (25.9%) while 10.6% are health worker. This was illustrated in Table 1.

There were positive family history of allergy in 145 (54.7%) while 120 (45.3%) did not have. From the patients history perennial allergic rhinitis were noted in 169 (63.8%) patients while seasonal allergic rhinitis were noted in 96 (36.2%) patients. Using ARIA classification as shown in Table 2, majority 145 (54.8%) of the patients were moderate-

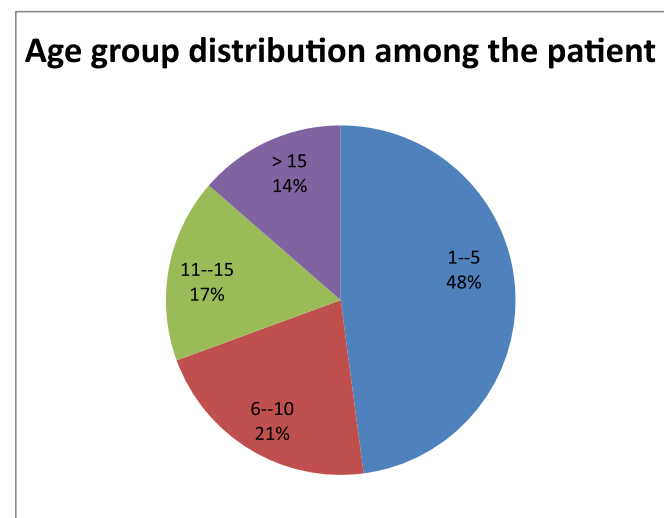


Fig. 1. Age group(years) among patients.

Download English Version:

<https://daneshyari.com/en/article/8806366>

Download Persian Version:

<https://daneshyari.com/article/8806366>

[Daneshyari.com](https://daneshyari.com)