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Factors Environmental and Background Relatives Pathological that Influence in the Development of the Asthma Bronchial in Pediatric Patients in Nicaragua

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ABSTRACT

Asthma is a chronic inflammatory disorder of the airways that involves bronchial hyper-reactivity, in turn, entails a narrowing bronchial as response to a multitude of stimuli. Clinically, it manifests as cough, wheezing, chest tightness, and dyspnea. The condition is exacerbated by the evening and usually is reversible. According to the latest WHO data, deaths caused by asthma in Nicaragua have reached 105 (37% of all deaths), occupying he place number 114 in the world. The aim of the study was describing the factors environmental and pathological family history that influences development of the bronchial asthma in children minors of 6 years attending to a unit of health of the north of Chinandega, 2023. Is a study being descriptive and of court cross, the universe and sample consisted of 60 children from the northern region of Chinandega. A survey of 16 closed questions was developed and validated by three expert judges, two graduates in Nursing Sciences and a pediatrician working at the Somotillo Municipal Hospital. Frequency and contingency tables were created using the SPSS version 25 program, resulting in: In sociodemographic data, age predominated 2 years old, the female sex with 63% and rural origin with 52%. Regarding to factors environmental predominated, the Excessive dust production (61.7%), recurrent respiratory diseases (70%), and vectors within the home such as cockroaches, mice, and dust mites. The predominant pathological history was: a family member diagnosed with rhinitis allergic: 50.8%, familiar diagnosed with bronchial asthma: 53.3%, and diagnosed with COPD: 54.2%.

INTRODUCTION

Asthma is a chronic inflammatory disorder of the airways that involves bronchial hyperreactivity. This, in turn, leads to bronchial narrowing in response to a multitude of stimuli. It clinically manifests as with cough, wheezing, oppression thoracic and dyspnoea. The condition is exacerbated at night and is usually reversible [1].

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In 2018, the WHO issued a report on the situation of the asthma bronchial in the world, affirming that most deaths occur in low-income countries, the main factor being inhaled substances and particles that can cause reactions allergic either irritate the ways respiratory [2].

The National Allergy Committee published an article in 2021 on the updated Diagnostic and Treatment Guideline: Bronchial Asthma in Children ≥ 6 Years of Age. The most significant changes, although not the only ones, are observed in the strategies therapeutic. In this version, treatment is stratified into "levels" (1 to 5). The current paradigm of change in the treatment of chronic asthma consists of eradicating the prescription of bronchodilators (salbutamol) on demand [3].

In Nicaragua, this condition is one of the top 10 reasons for visiting health services, especially emergency and outpatient clinics. Since 2002 to 2011, he asthma increase his prevalence in a 52% of Nicaraguan children under 6 years of age experience this disease, making it the most common chronic childhood illness and the leading cause of school absenteeism, urgent pediatrician visits, and hospitalizations in the country [3].

The specific causes that justify the uninterrupted increase in the prevalence of asthma have not been established. bronchial in the countries industrialized in the last two decades, although today HE accepts as a maid tried only to leave of numerous studies cross-sections of broad consistency repeated in the same geographical area. This disease affects 4-8% of the world's population.

Based on the above, this research aims to describe the environmental factors and pathological family history that influence the development of bronchial asthma in children under 6 years of age in a health unit in northern Chinandega, 2023.

MATERIALS AND METHODS

He study is quantitative, descriptive and of court transversal, the universe and the sample consisted of 60 children from the northern area of Chinandega.

Participants met the following criteria: children who encountered this complication (bronchial asthma), assets in a unit of health of the area north of Chinandega, between the ages of 0 to 6 years, of both sexes

Data collection was conducted through a closed-ended survey. A pilot study was conducted. to 6 children attendees to the unit of health of the north from Chinandega.

Permission was requested from the parents of children with this disease in order to obtain access to the information. of the participants, HE them I explain verbally the importance and objective of the research, its ethical aspects, having answered all their concerns, the parents were asked for informed consent and to begin the survey.

The data were entered and analyzed in the SPSS program database, where the variables were described, HE they used tables of frequency. He study was approved by the Research Committee of the Regional University Center - Somotillo.

RESULTS

In terms of sociodemographic data, the predominant age group was 2 years, the female gender (63%), and the rural origin (52%). Regarding environmental factors, the predominant factors were excessive dust production (61.7%), recurrent respiratory illnesses (70%), and vectors within the home (70%). such as: cockroaches, mice and mites dust. The predominant pathological history was: relative diagnosed with allergic rhinitis: 50.8%, relative diagnosed with bronchial asthma: 53.3%, and those diagnosed with COPD: 54.2%.

Table 1. Data sociodemographic of the population in study

Variable	Value	Frequency	Percentage
Age	Maximum: 6 Minimum: 1	Fashion: 2	Media: 3.47
Sex	Male	22	36.70%
	Female	38	63.30%
Origin	Urban	29	48.30%
	Rural	31	51.70%
State Civil guardian	Single	15	25%
	Married	25	41.70%
	Widowed	3	5%
Tutor's education	Union Primary	7	28.30%
	Stable	16	26.70%
	Secundaria	28	46.70%
	Universidad	12	20%
	Analfabeto	4	6.70%
	Total	60	100%

Fountain: Questionnaire

Table 2. Common areas of the home

Variable	Value	Frequency	Percentage
What are the most common environments in your home?	Powder	26	43.30%
	Humidity	22	36.70%
	Mold	12	20%
	Total	60	100%

Source: Questionnaire

In how much to the environments further common in the homes, HE found that he 43.3% is the Dust, being the second further frequent with a 36.7% the Humidity and being he of lower presence with 20% of Mold.

Table 3. Excessive production of dust

Variable	Value	Frequency	Percentage
Does it exist? in his home excessive dust production?	No.	22	36.70%
	Yes	38	63.30%
	Total	60	100%

Fountain: Questionnaire

In how much to the production excessive of dust present in the homes HE found with 63.7% and with a 36.7% lower presence.

Table 4. Diseases respiratory there is in his home

Variable	Value	Frequency	Percentage
That causes of respiratory diseases there is in your home?	Smoke of tobacco	20	33.30%
	Pets	24	40%
	Quilts	11	18.30%
	Pollen	5	8.30%
	Total	60	100%

Fountain: Questionnaire

Among the causes of respiratory diseases, 40% are pets, 33.3% tobacco smoke, 18.3% quilts and with 8.3% was found to be pollen.

Table 5. Vectors in his home

Variable	Value	Frequency	Percentage
What types of vectors are there in your home?	Cockroaches	26	43.30%
	Mice	25	41.70%
	Mites of the powder	9	15%
	Total	60	100%

Fountain: Questionnaire

Regarding the different types of vectors present in the home, the most prevalent were cockroaches at 43.3%, followed by mice at 41.7%, and the least prevalent were dust mites.

Table 6. Has familiar diagnosed with asthma bronchial

Variable	Value	Frequency	Percentage
Do you have a family member diagnosed? With bronchial asthma?	Yes	31	51.70%
	No	29	48.30%
	Total	60	100%

Fountain: Questionnaire

Table 7. Has familiar that suffer of rhinitis allergic

Variable	Value	Frequency	Percentage
Has familiar that suffer of allergic rhinitis?	Yes	30	50%
	No	30	50%
	Total	60	100%

Fountain: Questionnaire

As soon as to the presence of rhinitis allergic in the family he 50% I determine that if you know is present and 50% deny it.

DISCUSSION

To the describe the different factors environmental associated with the asthma bronchial HE determined as main he dust, Pets and cockroaches are the most common vectors in people's homes. This is consistent with what was previously stated by the Dr. Olalla Verdeguer Segarra that he dusts of home is the main source of allergens by verifying that many of their patients with rhinitis or asthma had tests allergic positive when used samples of dust obtained from their own homes.

In how much to the presence of causes of respiratory diseases 32 of 60 reflected that the cause of diseases respiratory are the pets. It which It was stated by Dr. Manuel de las Heras Gózalo, who indicates that the prevalence of animal allergies in the last decade constitutes a major health problem, since the majority of known allergens contained in animal secretions belong to the lipocalin and albumin family, largely responsible for that a person allergic to an animal also it sea to other animals with which he never had contact.

Regarding family pathological history, a predisposition to respiratory diseases and allergic rhinitis were found; these were more common among female relatives in the study population.

CONCLUSION

It was determined that excessive dust production, vectors, pets present in the home and family history, respiratory diseases are indicators for the development of bronchial asthma in children under 6 years of age.

ACKNOWLEDGEMENTS

None.

CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

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