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ORIGINAL ARTICLE

Comparison of the prevalence of bronchial asthma in school-aged children and adolescents on Roatán Island and in other coastal communities in Honduras



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KEYWORDS

African descent;
Asthma;
Garifuna;
Prevalence;
Wheezing;
Cough;
Dyspnoea

Abstract

Background: The rise in consultations for asthma or wheezing in primary and hospital care in recent years suggests a progressive increase in the prevalence of this disease, causing morbidity and considerable medical expenses. However, in Honduras no information about the prevalence of asthma and its trends is available. The aim was to determine the prevalence of asthma in the school-aged and adolescent population in several coastal communities in Honduras.

Methods: We performed a multi-centre, observational, cross-sectional study, for which we took a random sample of 805 school-aged children and adolescents between the ages of 6 and 17 years residing in the coastal communities of Coxen Hole, French Harbour, Los Fuertes, Sandy Bay, Punta Gorda, Travesía and Bajamar. The prevalence and severity of asthma were determined using the validated International Study of Asthma and Allergies in Childhood (ISAAC) questionnaire answered by the child's parents. Point and cumulative prevalence were estimated, stratified by ethnic group, community, sex, and family history of asthma.

Results: We found an overall prevalence of wheezing in the past of 40.5% (95% CI 37.1, 43.9); of wheezing in the last 12 months of 28.0% (95% CI 24.9, 31.1); and have or have had asthma of 31.7% (95% CI 28.5, 34.9). The community with the highest prevalence was Bajamar with 51.0% (95% CI 44.0, 58.0), and in general, the Garifuna ethnic group with 36.5% (95% CI 31.0, 41.9).

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Conclusion: The prevalence of asthma was higher than in other Latin American regions, with the most cases in participants of African descent, and those with a family history of asthma. The results will provide important data on asthma in Honduras and will contribute to the identification of risk groups.

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PALABRAS CLAVE

Afrodescendientes;
Asma;
Garífuna;
Prevalencia;
Sibilancias;
Tos;
Disnea

Comparación de la prevalencia del asma bronquial en la población escolar y adolescente en la isla de Roatán y otras comunidades costeras de Honduras

Resumen

Antecedentes: El aumento de consultas por asma o sibilancias en atención primaria y hospitalaria en los últimos años sugiere un aumento progresivo de la prevalencia de esta enfermedad, causando morbilidad y gastos sanitarios considerables. Sin embargo, en Honduras no hay información acerca de la prevalencia de asma y su tendencia. El objetivo fue determinar la prevalencia de asma en la población escolar y adolescente en diversas comunidades costeras de Honduras.

Métodos: Realizamos un estudio multicéntrico, observacional, transversal, para lo cual tomamos una muestra aleatoria de 805 menores escolares y adolescentes entre las edades de 6 a 17 años en las comunidades costeras de Coxen Hole, French Harbour, Los Fuertes, Sandy Bay, Punta Gorda, Travesía y Bajamar. Se determinaron la prevalencia y severidad de asma mediante el cuestionario validado *Study of Asthma and Allergies in Childhood* (ISAAC) contestado por los padres del niño. Se estimaron prevalencia puntual y acumulada estratificando por grupo étnico, área, sexo e historia familiar de asma.

Resultados: Encontramos una prevalencia global de sibilancias en el pasado de 40.5% (IC95% 37.1, 43.9); de sibilancias en los últimos 12 meses de 28.0% (IC95% 24.9, 31.1); y de tener o haber tenido asma de 31.7% (IC95% 28.5, 34.9). La comunidad con mayor prevalencia fue Bajamar con 51.0% (IC95% 44.0, 58.0), y en general, la etnia Garífuna con 36.5% (IC95% 31.0, 41.9).

Conclusión: La prevalencia de asma fue considerablemente más alta que en otras regiones de Latinoamérica, encontrándose la mayoría de casos en participantes de etnias afrodescendientes y con el antecedente familiar de asma. Los resultados proporcionarán datos importantes del asma en Honduras y contribuirá a la identificación de grupos en riesgo.

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Introduction

Asthma is a heterogeneous and multifactorial disease, generally characterised by chronic inflammation of the respiratory tract, which is defined by a history of respiratory symptoms such as wheezing, shortness of breath, chest tightness, and cough, which vary over time and in intensity, along with a varying limitation in the expiratory air flow.¹ It is present in all countries worldwide regardless of their degree of development, although more than 80% of asthma deaths take place in low and mid-low income countries.² The prevalence varies according to geographic region, climate, lifestyle, and the economic development of each region. The World Health Organisation (WHO) estimates that it affects 300 million people and that it is still a cause of death worldwide.³

Due to the increase in the prevalence of asthma, treatment costs at the public health level have increased,

reflecting an increased use of economic resources while at the same time having a social impact by being an important cause of school absenteeism.^{4,5} This is why several epidemiological studies have been conducted in Latin America and around the world, the most important being the International Study of Asthma and Allergies in Childhood (ISAAC), which revealed a prevalence of between 5% and 20% of the child population.⁶ This has awoken an enormous interest in identifying factors influencing the prevalence of this disease which in Honduras largely affects the paediatric population, where there are not enough up-to-date studies that allow the impact it has on the healthcare system and its socioeconomic impact to be determined.

The main objective of this research study was to compare the prevalence of asthma in the school-aged and adolescent population from 6 to 17 years of age among several communities on Roatán Island, located off the Caribbean coast in Honduras, and two ethnic coastal communities in the city

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