



ORIGINAL ARTICLE

Clinical evolution and nutritional status in asthmatic children and adolescents enrolled in Primary Health Care



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KEYWORDS

Asthma;
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Clinical evolution;
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Abstract

Objective: To evaluate the clinical evolution and the association between nutritional status and severity of asthma in children and adolescents enrolled in Primary Health Care.

Methods: A retrospective cohort study of 219 asthmatic patients (3–17 years old) enrolled in Primary Care Services (PCSs) in Embu das Artes (SP), from 2007 to 2011. Secondary data: gender, age, diagnosis of asthma severity, other atopic diseases, family history of atopy, and body mass index. To evaluate the clinical outcome of asthma, data were collected on number of asthma exacerbations, number of emergency room consultations and doses of inhaled corticosteroids at follow-up visits in the 6th and 12th months. The statistical analysis included chi-square and Kappa agreement index, with 5% set as the significance level.

Results: 50.5% of patients started wheezing before the age of 2 years, 99.5% had allergic rhinitis and 65.2% had a positive family history of atopy. Regarding severity, intermittent asthma was more frequent (51.6%) and, in relation to nutritional status, 65.8% of patients had normal weight. There was no association between nutritional status and asthma severity ($p=0.409$). After 1 year of follow-up, 25.2% of patients showed reduction in exacerbations and emergency room consultations, and 16.2% reduced the amount of inhaled corticosteroids.

Conclusions: The monitoring of asthmatic patients in Primary Care Services showed improvement in clinical outcome, with a decreased number of exacerbations, emergency room consultations and doses of inhaled corticosteroids. No association between nutritional status and asthma severity was observed in this study.

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PALAVRAS-CHAVE

Asma;
Crianças;
Evolução clínica;
Atenção básica à
saúde

Evolução clínica e estado nutricional de crianças e adolescentes asmáticos acompanhados em Unidade Básica de Saúde

Resumo

Objetivo: Avaliar a evolução clínica e a associação entre o estado nutricional e a gravidade da asma em crianças e adolescentes matriculados em Unidades Básicas de Saúde (UBS).

Métodos: Estudo de coorte retrospectiva com 219 pacientes asmáticos (3–17 anos de idade), matriculados em UBS do município de Embu das Artes (SP), de 2007 a 2011. Dados secundários: sexo, idade, diagnóstico de gravidade da asma, outras atopias, antecedentes familiares de atopia, índice de massa corporal. Para avaliar a evolução da asma foram coletados número de crises de asma, número de atendimentos de urgência e doses de corticoide inalatório no 6º e 12º mês de acompanhamento. A análise estatística incluiu testes de qui-quadrado e índice de concordância Kappa, com nível de significância de 5%.

Resultados: Dos pacientes, 50,5% iniciaram a sibilância antes dos dois anos de idade; 99,5% apresentaram rinite alérgica e em 65,2% antecedente familiar para atopia positivo. Quanto à gravidade, a asma intermitente foi mais frequente (51,6%), em relação ao estado nutricional, 65,8% dos pacientes eram eutróficos. Não houve associação entre o estado nutricional e a gravidade da asma ($p=0,409$). Após um ano de acompanhamento; 25,2% dos pacientes reduziram as exacerbações e os atendimentos nas urgências e 16,2% reduziram a quantidade de corticoide inalatório.

Conclusões: O acompanhamento dos pacientes asmáticos em UBS demonstrou melhora da evolução com redução do número de exacerbações, dos atendimentos nas urgências e das doses de corticoide inalatório. Não houve associação entre o estado nutricional e gravidade da asma. © 2015 Sociedade de Pediatria de São Paulo. Publicado por Elsevier Editora Ltda. Este é um artigo Open Access sob a licença CC BY (<https://creativecommons.org/licenses/by/4.0/deed.pt>).

Introduction

Asthma is a complex inflammatory disease, recognized as one of the most common chronic diseases of childhood. It is characterized by recurrent respiratory symptoms and it significantly impairs the quality of life. In Brazil, epidemiological studies carried out in recent decades indicate a trend of increasing prevalence of asthma in children and adolescents.^{1–5} In this same period, an increase in the prevalence of overweight and obesity in children and adolescents has also been observed in several countries and in Brazil, which constitutes a major public health problem.⁶ This analysis is supported by three national surveys that assessed nutritional status from 1974 to 2009, showing an increase in overweight and obesity in children and adolescents in all income groups and in all regions of Brazil.⁷ Obesity is a complex and multifactorial disease and it actively contributes to the development of cardiovascular diseases, arterial hypertension, diabetes mellitus and metabolic syndrome, in addition to exacerbating asthma.^{8–12}

Epidemiological studies have suggested an association between obesity and asthma, more consistent in adults, revealing that obese asthmatic individuals have a higher frequency of exacerbation crises, emergency room consultations and need for higher doses of inhaled corticosteroids, as well as greater difficulty in controlling the disease.^{11,13,14} The association between obesity and asthma in children and adolescents is still controversial, and studies frequently use different methodologies, which explains, in part, the varying results obtained.^{11,15–21}

In 1988, as part of the activities of the Teaching-Care Integration Program developed by Universidade Federal de São Paulo in the town of Embu das Artes, in the metropolitan region of São Paulo, the Care Program for Children with “Wheezing” was implemented in partnership with the Department of Health. The structure of this program considered as its principle the role of primary care in the management and monitoring of the most prevalent morbidities. The program’s population consists of children and adolescents with recurrent wheezing, treated by a team of pediatricians, undergraduate medical students and medical residents in Pediatrics. The activities developed by the program include medical consultations, educational groups for family members and provision of medications for asthma control.

Ventura et al.²² evaluated this program in the 1988–1993 period and observed that before its implantation, most patients sought treatment for the disease only in periods of exacerbations and at emergency services. The authors verified that after 1 year of follow-up, children who maintained higher adherence to the program had benefited, despite the limited supply of asthma medications available in the public health system in that period, which was restricted to the distribution of bronchodilators, theophylline and systemic corticosteroids only. This situation has changed since 2009, with Portaria N° 2981 of the Ministry of Health, which provides for the regular provision of medications for asthma control during crises and for continuous use by the municipality.²³

Considering the nutritional transition in Brazil, with the reduction in the prevalence of malnutrition and increase

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