

# EUROPEAN RESPIRATORY JOURNAL

OFFICIAL  
JOURNAL OF  
THE EUROPEAN  
RESPIRATORY  
SOCIETY

PUBLISHED  
JOINTLY BY THE  
SOCIETY AND  
MUNKSGAARD  
COPENHAGEN

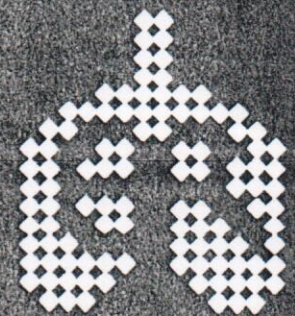
**Abstracts**

**World Asthma Meeting**

Barcelona, Spain, December 9–13, 1998

**Official Journal of the European Respiratory Society**

Published jointly by  
The Society and Munksgaard/Copenhagen



**Methods and Results:** 2117 (45% females) students were surveyed. The prevalence rates (with 95% CI) for wheezing ever, current wheeze (within the last year) and physician diagnosis of asthma were 22.4%, 13.4% and 16.1% respectively. The prevalence rates for symptoms of AR, current symptoms and physicians diagnosis of AR were 23%, 65% and 11% respectively. The prevalence rates of rash ever, current rash and physicians diagnosis of eczema were 17%, 13% and 10.5% respectively. The prevalence of physicians diagnosis of asthma was higher in males (20%) compared to females (12%) ( $P = 0.001$ ).

**Conclusion:** Kuwait has a moderate prevalence of asthma in school children according to ISAAC criteria. We can not draw conclusions regarding the effect of the oil fires on asthma prevalence due to lack of pre-exposure data, but the results serve as a base line for future reference.

#### P404 INCREASED PREVALENCE OF ASTHMA IN SCHOOLCHILDREN IN RABAT

A. Bennis<sup>1</sup>, M.T. El Fassy, Z. Sayah, A. Badi, A. Benabdallah, S. Mouline, M. El Ftouh, J. Benamor, J.E. Bourkadi, S.E. Othmani, M. Bouzekri. <sup>1</sup>Résid Minaret, Angle Ammane-Yougoslavie, Rabat, Morocco

The prevalence of asthma seems to increase especially in Western countries. This study aims to determine the prevalence of asthma in schoolchildren in Rabat, Morocco, a developing country, and to make comparison with previous data. The survey was conducted with ISAAC (International Study of Asthma and Allergies in Childhood) protocol, between september and december 1995 and concerned schoolchildren aged 6-7 years (with questionnaire completed by parents) and 13-14 years (with self-completed questionnaire). Children were randomised from all pupils of the same school grades.

**Results:** For the 6-7 years group, 3052 children were randomised, 2612 parents have answered, 2549 questionnaires were included in analysis. For the 13-14 years group, 3449 pupils were randomised, 3335 have answered. 3276 questionnaires were included. The percentage of answers by 'yes' were as follow:

	6-7 yrs	13-14 yrs
Wheezing at any time in the past	13.2%	11.2%
Wheezing in the last 12 months	7.7%	6.8%
Asthma	5.0%	6.6%
Exercise wheezing in the last 12 months	5.6%	14.2%

In 1986 we have performed studies on asthma prevalence in children aged 6-15 yrs with a parents' questionnaire (Bennis A et al. Eur Resp J 1990; 3 suppl 10: 167s) and in adolescents aged 11-20 yrs with a questionnaire completed by an interviewer (Bennis A. et al. Rev Fr Mal Resp 1992; 9: 163-9). Questions about wheezing at any time in the past and about asthma (has your child - or have you ever had asthma?) were the same in the two studies. Comparative results are showed in the following table:

	1986		1995		1986		1995	
	6-15 yrs n = 1799	6-10 yrs n = 470	6-7 yrs n = 2549	12-20 yrs n = 1464	13-15 yrs n = 438	13-14 yrs n = 3278		
Wheezing in the past	8.3%	8.6%	13.2%	6.0%		11.2%		
Asthma	3.1%	2.9%	5.0%	3.3%	3.7%	6.6%		

Despite differences in methods, we can conclude that prevalence of reported wheezing and asthma in schoolchildren has increased between 1986 and 1995.

#### P405 THE PREVALENCE OF ASTHMA, ALLERGIC RHINITIS AND ECZEMA IN BARBADOS. THE BARBADOS NATIONAL ASTHMA AND ALLERGY STUDY

Malcolm Howitt<sup>1</sup>, Raana Naidu<sup>2</sup>, Timothy C. Roach<sup>2</sup>. <sup>1</sup>Carlton Shopping Plaza, Black Rock, St. Michael; <sup>2</sup>Queen Elizabeth Hospital, St. Michael, Barbados

Barbados, the easternmost of the Caribbean Islands, has relatively little atmospheric pollution. Despite this, there has been a fourfold increase in the number of asthmatics visiting the Accident and Emergency Department of the Queen Elizabeth Hospital, the only tertiary care hospital in the Island, between 1980 and 1994. This study was undertaken to discover the prevalence of asthma, allergic rhinitis and eczema in schoolchildren age 6-7 years and 13-24 years.

The Phase I protocol of the International Study of Asthma and Allergy (ISAAC) was used. Questionnaires were distributed to parents of 3,894 students in the 6-7 year old group and to 3,500 students in the 13-14 year old group. In addition a video questionnaire was shown to the older pupils. This represents 100% of the Island's population of school children in these age groups. There was a 93% return rate for the questionnaires.

This study showed that the prevalence of asthma, allergic rhinitis and eczema in the 6-7 year old children was 18.3%, 28.6% and 10.6% respectively. For the three conditions in the 13-14 year old children the prevalence was 17.7%, 38.2% and 10% respectively.

The prevalence for these allergic conditions is high and more in keeping with the figures from developed countries than rural developing countries. The high prevalence may be related to increasing affluence and a trend towards urbanisation and modernisation of the domestic environment.

#### P406 PREVALENCE OF ASTHMA IN THREE REGIONS OF SAUDI ARABIA A.R. Al-Frayh<sup>1</sup>, S.M. Hasnain<sup>2</sup>, M.O. Gad El Rab<sup>1</sup>, S.T. Al-Sedairy<sup>2</sup>. <sup>1</sup>College of Medicine, King Saud University; <sup>2</sup>King Faisal Specialist Hospital & Research Centre, Riyadh, Saudi Arabia

Prevalence of bronchial asthma and other atopic diseases in children was conducted in three geographically different regions of Saudi Arabia using a standard protocol comprising 35 questions. The questionnaire used in this study was similar to that being used by International Study of Asthma and Allergies (ISAAC). A total of 1600 children ages 1-16 years were incorporated in the study. A high prevalence of asthma in all three regions i.e. Hail 22.1%, Taif 23.1% and Gizan 21.0% was recorded. In addition, an overall percentage of atopic symptoms including allergic rhinitis 24.1% (18.1%-32.1%), eczema 11.5% (9.5%-15.9%), as well as wheezing 20.8% (17.4%-23.1%), cough 26.8% (24.2%-29.0%) and breathlessness 23.7% (21.4%-25.3%), were recorded. The present prevalence of asthma (mean 22.4%) observed in the three regions is higher than that reported for other areas of the Kingdom. It should, however, be noted that survey for the other regions were conducted in the recent past. The diagnostic accuracy over time control have improved as well as the actual definition of asthma. However, if the results of these studies are pooled together the actual prevalence of asthma will emerge to be 20.9%. The study suggest that there is a high prevalence of asthma in Saudi Arabia despite the variations in geography and climate and associated causative factors.

#### P407 PREVALENCE OF ASTHMA AND WHEEZING IN TURKISH CHILDREN

İ. Türktas<sup>1</sup>, Z.T. Selçuk<sup>2</sup>, A.F. Kalyoncu<sup>2</sup>. <sup>1</sup>Dept. Pediatric Allergy and Asthma, Gazi University; <sup>2</sup>Dept. Chest Diseases, Hacettepe University, Ankara, Turkey

The first nationwide survey of chronic childhood diseases among those aged 0 to 17 was conducted in 1996. 146 primary care physicians who were specifically trained filled a questionnaire via interview with the parents in randomly selected families in both urban and rural areas of 27 cities including the biggest 12 and randomly selected 15 cities. Data was collected for 46 813 children (23 512 males and 23 301 females) of whom 66% resided in urban and 34% in rural area. The cumulative and current (last 12 months) prevalences were 14.7% and 2.8% for asthma, and 15.1% and 3.4% for wheezing. The current prevalences of asthma and wheezing were significantly higher among males than females (3.2% vs. 2.3%, and 3.9% vs. 2.9%), among those residing in coastal areas than inland (3.5% vs. 2.2%, and 4.1% vs. 2.8%), or among children living in metropolitan than in rural area (3.0% vs. 2.2%, and 3.6% vs. 2.9%). Younger age, male gender, residing in coastal and/or metropolitan area, exposure to indoor cigarette smoke, presence of familial or personal atopic history, low socioeconomic status all appeared to influence the occurrence of lifetime and current asthma and wheezing.

#### P408 PREVALENCE OF BRONCHIAL HYPERRESPONSIVENESS IN CHILDREN WITH PAST HISTORY OF BRONCHIOLITIS

K. Abu-Shams, A. Sebastián<sup>1</sup>, J. Arribas<sup>2</sup>, J. Guillén<sup>1</sup>, C. Colás<sup>3</sup>, F. Duce<sup>3</sup>. <sup>1</sup>S. Neumología, H Virgen del Camino, Pamplona; <sup>2</sup>S. Neumología, HCU Zaragoza; <sup>3</sup>S. Neumología H. Miguel Servet, Zaragoza; <sup>3</sup>S. Alergia HCU Zaragoza, Spain

The purpose of this study was to determine the prevalence of bronchial hyperresponsiveness (BH) in a group of children with past history of acute viral bronchiolitis (AVB) with less than one year of age.

**Material and Methods:** 97 children between 9 and 14 years (57 males and 40 females) who had had AVB (G-1) and 52 controls matched age (G-2) were studied. G-1 was divided into two groups: 49 children who had remained symptom free (G-1sf) and 48 children who developed episodic wheeze (G-1w). They performed a methacholine challenge according to a modification of the method of Cockcroft<sup>1</sup>. Diagnosis of AVB was made following the criteria of McConnochie<sup>2</sup>

#### Results:

Comparison of subject groupings on methacholine reactivity

	G-1		G-1sf		G-2	
	N	%	N	%	N	%
Moderate	19	23.7	7	14.2	-	-
Mild	44	55	27	55.2	7	25.9
Negative	17	21.3	15	30.6	20	74.1

**Conclusions:** The prevalence of bronchial hyperresponsiveness in children with past history of acute viral bronchiolitis is increased.

[1] Cockcroft DW. Clinical Allergy 1977; 7: 235-242

[2] McConnochie KM. Am J Dis Child 1983; 137: 11-13

#### P409 PREVALENCE OF ASTHMA IN AUSTRALIAN AND NIGERIAN CHILDREN

A. Faniran, J. Peat, A. Woolcock. Institute of Respiratory Medicine, University of Sydney, NSW, Australia

In order to identify and measure factors which influence the prevalence of asthma,