

The Commence of Bronchial Asthma among Kids

Mosab Nouraldein Mohammed Hamad^{1*} and Yousif M Elhaj²

¹Medical Laboratory Science Department, Faculty of Health Science, Elsheikh Abdallah Elbadri University, Sudan

²Faculty of Medicine, Karary University, Sudan

***Corresponding Author:** Mosab Nouraldein Mohammed Hamad, Medical Laboratory Science Department, Faculty of Health Science, Elsheikh Abdallah Elbadri University, Sudan

Received: February 20, 2020; **Published:** February 29, 2020

Abstract

This review article discuss about the commence of bronchial asthma among children in different region worldwide. It is defined as a pulmonary condition signed by spasms in the bronchi of the lungs, leading to difficulty in breathing. It is frequently results from an allergic reaction or other forms of hypersensitivity.

Etiologies of asthma are dissimilar from hereditary, food, air pollution, psychological, microbial and to idiopathic causes. Information about the prevalence of asthma among all age groups, certainly children must be updated, because those kids will be the future youth and we need healthy, peaceful and strong world free from air pollution, parasitic infections and other harmful allergens.

Keywords: *Bronchial Asthma; Prevalence; Children; Hypersensitivity; Allergens*

Background

Asthma is a disease recognized by exaggerated receptiveness of the trachea and bronchi to different stimuli and is manifested by a common narrowing of the airways that alter in severity either impulsively or as a result of treatment [1]. "It" is originated from the Greek word α' (ω , meaning "gasp for breath". The expression initially did not define a sickness as we know it today but was engaged to mean respiratory symptoms of a host of pulmonary and heart conditions [2]. It has been proposed that dissimilar forms of training lead to diverse degrees of bronchospasm in persons vulnerable to exercise-made asthma (EIA), with free-range running, treadmill running, cycling, walking, and swimming in roughly diminishing order of effect. The causes for this are uncertain. Preceding investigations in kids have shown treadmill running to cause more bronchospasm than treadmill walking, still when workload was well matched throughout the comparisons [3].

There have been lots of indirect approaches to inspect airway structure, particularly in association with airway inflammation and hyper-receptiveness. More lately, with the beginning of fiberoptic bronchoscopy, biopsy, and lavage in asthmatic patients, pathological tests have been expanded to the living asthmatic person [4].

Prevalence

A study done by J Morrison Smith, *et al.* showed that; the commonness of asthma in school kids in Birmingham which was primary conducted in 1956-57 was recurring in 1968-69. There has been a raise in the occurrence of absolutely investigated asthma from 1 - 8% to 2 - 3%, not counting an even higher number of kids (3 - 2%) with wheezing. A significantly higher incidence in boys than in girls was once more observed both for specific asthma and for wheezing but the propensity to recovery in boys with exact asthma was slight whereas there was a noticeable recovery in cases of wheezing which about certainly represented mild asthma. Negro kids born in England had a

similar commonness to European kids but children born exterior England in the West Indies or in Asia had a considerably lower commonness of asthma and of wheezing for causes which are not fully understood but which might gainfully be considered further. Asian kids, though, appeared to keep their low occurrence of asthma even when born in England [5]. Study done by Hong SJ, *et al.* showed that; throughout the 5 year duration from 1995 to 2000, the commences of asthma has risen in Korean kids [6].

Study done by Javier Mallol, *et al.* showed that; In kids aged 13 - 14 years, the occurrence of an asthma ever ranged from 5.5 - 28% and the commence of wheezing in the last 12 months from 6.6 - 27%. In kids aged 6 - 7 years, the occurrence of asthma ever ranged from 4.1 - 26.9%, and the occurrence of wheezing in the last 12 months ranged from 8.6 - 32.1%. The lower commence in centers with greater levels of atmospheric contamination predicts that chronic inhalation of polluted air in kids does not participate to asthma. Also, the high numbers for asthma in a district with a high prevalence of gastrointestinal parasite infection, and a high burden of acute pulmonary infections occurring early in life, predict that these factors, regarded as protective in other areas, do not have the similar effect in this area [7]. The commence of asthma in Asian countries ranges between 5.2% in Taipei to 30% in New Zealand and in other countries it is about 10 - 17% [8].

Hospital based study done by H. Paramesh on 20,000 kids below the age of 18 years from 1979, 1984, 1989, 1994 and 1999 in the city of Bangalore showed a commence of asthma was 9%, 10.5%, 18.5%, 24.5% and 29.5% respectively [8]. Study done by N AkcĖ akaya, *et al.* showed that; The overall cumulative and recent commences of wheezing in Istanbul school children were 13.7 and 7.2% respectively [9].

Study done by Shibi Chakravarthy K, *et al.* showed that; Of the 855 kids investigated, the total occurrence of breathing disorders (involving asthma) was 18% and the commence of 'confirmed asthma was 5% [10]. Study done by J K Peat showed that; commence of wheeze in last year raised in Belmont, from 10.4% (75/718) in 1982 to 27.6% (240/873) in 1992 ($P < 0.001$) and in Wagga Wagga, from 15.5% (119/769) to 23.1% (183/795) ($P < 0.001$). The occurrence of airway hyper-responsiveness raised two fold in Belmont to 19.8% (173/873) ($P < 0.001$) and 1.4-fold in Wagga Wagga to 18.1% ($P < 0.05$). The commence of airway hyper-responsiveness increased mainly in atopic kids only, but the occurrence of atopy was constant (about 28.5% in Belmont and about 32.5% in Wagga Wagga). Numbers of home dust mites raised 5.5-fold in Belmont and 4.5-fold in Wagga Wagga [11].

Study done by F Abuekteish, *et al.* in Northern Jordan, a questionnaire given to 3540 school kids aged 6 - 12 years in Irbid City. The full questionnaires were returned by 3182 kids, a response rate of 90%. Showed that; the occurrence of physician-investigated asthma was 4.1%. Wheezing was documented by 8.3% of kids. The male: female ratio was 2:1 for both situations. In order of frequency, the initiating factors were pulmonary tract infections, cold surroundings, training and dust [12].



Figure 1: Asthmatic African kid.

Conclusion

Further studies are required to update data about the prevalence of this respiratory disorder, which affect the huge numbers of people around the globe, certainly children.

Bibliography

1. Elvan Tabachnik and Henry Levison. "Infantile bronchial asthma". *Journal of Allergy and Clinical Immunology* 67.5 (1981): 339-347.
2. ER McFadden. "A Century of Asthma". *American Journal of Respiratory and Critical Care Medicine* 170.3 (2004): 215-221.
3. H Kilham., *et al.* "Running, walking, and hyperventilation causing asthma in children". *Thorax* 34.5 (1979): 582-586.
4. Jonathan P. Arm and Tak H Lee. "The Pathobiology of Bronchial Asthma". *Advances in Immunology* 51 (1992): 323-382.
5. J Morrison Smith., *et al.* "The changing prevalence of asthma in school children". *Clinical Allergy* 1.1 (1971): 57-61.
6. Hong SJ., *et al.* "The prevalence of asthma and allergic diseases in Korean children". *Korean Journal of Pediatrics* 51.4 (2008): 343-350.
7. Javier Mallol., *et al.* "Prevalence of Asthma Symptoms in Latin America: The International Study of Asthma and Allergies in Childhood (ISAAC)". *Pediatric Pulmonology* 30.6 (2000): 439-444.
8. H Paramesh. "Epidemiology of Asthma in India". *Indian Journal of Pediatrics* 69.4 (2002): 309-312.
9. Akçakaya N., *et al.* "Prevalence of bronchial asthma and allergic rhinitis in Istanbul school children". *European Journal of Epidemiology* 16.8 (2000): 693-699.
10. Shibi Chakravarthy K., *et al.* "Prevalence of asthma in urban and rural children in Tamil Nadu". *The National Medical Journal of India* 15.5 (2002): 260-263.
11. JK Peat., *et al.* "Changing prevalence of asthma in Australian children". *British Medical Journal* 308.6944 (1994): 1591-1596.
12. F Abuekteish., *et al.* "Prevalence of asthma and wheeze in primary school children in Northern Jordan". *Annals of Tropical Paediatrics* 16.3 (1996): 227-231.

Volume 9 Issue 3 March 2020

©All rights reserved by Mosab Nouraldein Mohammed Hamad and Yousif M Elhaj.