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Pediatric asthma before treated should be prevented

A. CANTANI

Department of Pediatrics, Allergy and Clinical Immunology Division, University of Rome "La Sapienza" - Rome (Italy)

Abstract. – **Several reports indicate an ongoing increase in the incidence, prevalence and severity of atopic diseases both in industrialized and developing countries. This prevalence is steadily increasing mainly in the last 20 years. Babies of atopic parents are particularly prone to develop atopic diseases, and for this reason they are called "high risk babies". During the last decade, great interest has been devoted to prevent the development of allergy and asthma in such babies (primary prevention).**

Key Words:

Asthma, High risk babies, IgE-mediated reactions, Inhalant allergy, Prevention.

Comment

Several authors consider pediatric asthma a disease to be cured and not to be prevented, thus they only cite the prevention of environmental allergens, the basic treatment of pediatric asthma[1]. Allergy to inhaled allergens is presently a common complaint during infancy and childhood, and exposure may even occur as early as prenatally. An analysis of mine has shown that 12% of infants and children suffer from asthma, and 15% from allergic rhinitis, and the cumulated incidence in adolescents varies between 25-35%, while the prevalence is about 20%. What is not appreciated by several colleagues is that the onset of such disorders is increasingly in advance, with growing numbers of wheezing infants at an early age (allergic marsh)[2]. The phenotypic expression of these illnesses varies extensively, being mild in some cases, severe and frustrating in many, and even life-threatening in others, thus confronting doctors with one of the most demanding challenges. Prevention of respiratory disease should therefore begin in the fetal life, and be in the first place since the first days of life[3].

There are concerns about corticosteroids, since stopping drug treatment in children with asthma results in clinical deterioration[4], or in the return of bronchial hyperresponsiveness within two weeks[5], with the obvious conclusion that the nature of drug treatment is suppressive rather than curative[1]. However such negative results could be greatly reduced if more and more pediatricians adopted the practice of prescribing reduced doses[6,7]. Using the lowest possible dose and/or alternate-day dosing appear to be safer[6], and growth rates[6] and endocrine and lung function return to normal[7]. To reduce the risk of systemic effects, it has been suggested to prefer long acting drugs and start treatment at 3 PM, since there are no differences compared to qid dosing, nor influences on 24-h cortisolemia and cortisoluria[8].

Completely neglected[1] or disregarded[9] is the issue of specific immunotherapy (SIT) in children. We have recently demonstrated that 27/29 (93,1%) controlled studies in 2.077 children and as many controls have shown the effectiveness of SIT in pediatric age in the treatment of asthma due to pollens, house dust mites (Der p), epidermal derivatives, and molds ($p < 0.0001$)[10]. In all studies the children of the control groups, were treated with the drugs available, and cared for by their doctors as the children of the study group. Therefore 93% of the studies have confirmed the SIT's positive influence on the natural history with a total remission of asthmatic symptoms in the children that regularly completed the SIT cycle[10]. In addition severe adverse reactions during SIT are almost non existent in children[11].

The house-dust mite appears to be the most common offending allergen in asthma[12], and an early exposure to this allergen is associated with a significant increase of the risk of asthma at the age of 11[13]. Sporik et al concluded that "increased exposure to dust mites and other indoor allergen may be a factor contributing to the recent increases in the morbidity and mortality associated with asthma"[13]. Moreover the exposure during the 2 first year of life to environmental tobacco smoke and home dampness was found more frequently found among the house dust-mite sensitized children than among the controls[14]. In a prospective study on 1167 infants[15] it was demonstrated that some environmental factors such as maternal smoking, lower social classes, were interdependent and had a profound effect on the prevalence of asthma but not on other allergic disorders.

Therefore, according to previous and recent studies, prevention of atopic diseases in predisposed newborn babies, is worthwhile[16]. Environmental and dietary manipulations should be addressed to "high-risk babies" in order to avoid, or postpone the risk of sensitization, or to mitigate the clinical course of the atopic disease once established. On the portal of our Clinic stands an inscription suggesting a great responsibility: "*In puero homo*" ("In infant is the seed of the future man") since this may also mean that our goal should be to transmit to the adult the fruit of our preventive measures, an organism free of atopy, thus insuring the best quality of life both to infants, children and adults[2].

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