

**Abstract Preview****The development of childhood asthma: risk factors and family history**

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**Background:** It is generally believed that genetic predisposition is important in asthma, whereas environmental factors are assumed to trigger and modify the expression of the disease. Children of atopic parents are known to be at greater risk for atopy and asthma than children of non-atopic parents. However, the mode of inheritance of asthma and allergic diseases has not been fully elucidated.

**Method:** A cross-sectional, population based study using a questionnaire with 35 questions distributed to school children aged 6 to 16 years in 3 major cities of Saudi Arabia. The questionnaires were designed by a group of International panel before ISAAC was introduced and have been used to study prevalence of asthma and allergic rhinitis in the Kingdom of Saudi Arabia as well as in Pakistan.

**Result:** The study was conducted on approximately 3000 school children to analyse the risk conferred by family history of asthma, allergic rhinitis and eczema for the development of childhood asthma. The study revealed that the history of asthma in the immediate family (parents and siblings) conferred a 4.2-fold increased risk for development of childhood asthma. The risk in relatives (aunts, uncles and cousins) was found to be 3.3-fold ( $P < 0.0001$ ). The risk for the development of childhood asthma was increased  $\geq 3$  times with a history of rhinitis or eczema in the immediate family ( $P < 0.0001$ ). The risk for the development of rhinitis in the relatives was also found to be closely associated ( $P < 0.0001$ ). Exposure to cigarette smoke generated by the members of the family also conferred a 2-fold increased risk ( $P < 0.0001$ ). However, the study did not reveal any significant association either exposure to pets or history of eczema in relatives for the development of childhood asthma.

**Conclusion:** Inheritance patterns for asthma and other atopic diseases may differ but the presence of asthma and atopy in the immediate family and relatives are significant risk factor for the development of childhood asthma. The findings also suggest that strong familial aggregation along with environmental influences may be contributing to increased risk for childhood asthma in Saudi Arabia and elsewhere.

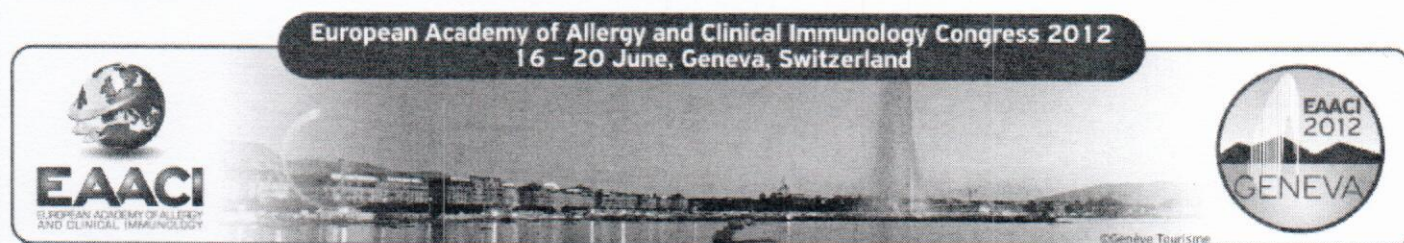


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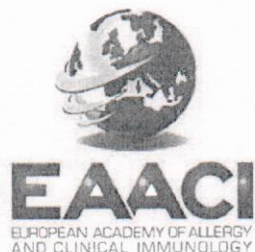
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<sup>1</sup>Pramongkutkiao Hospital, Division of Allergy and Clinical Immunology, Department of Medicine, Bangkok, Thailand; <sup>2</sup>Pramongkutkiao Hospital, Bangkok, Thailand
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<sup>1</sup>Department of Respiratory Disease, Postgraduate Medical Academy, Saint-Petersburg, Russian Federation; <sup>2</sup>Hospital Therapeutic Clinic, Pavlov Medical University, Saint-Petersburg, Russian Federation; <sup>3</sup>Immunology Research Institute of New England, Gardner, MA, United States
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<sup>1</sup>Asan Medical Center, University of Ulsan College of Medicine, Childhood Asthma Atopy Center, Department of Pediatrics, Seoul, Republic of Korea; <sup>2</sup>Seoul National University Bundang Hospital, Department of Pediatrics, Seongnam, Republic of Korea; <sup>3</sup>Inje University Hae-undae Paik Hospital, Department of Pediatrics, Pusan, Republic of Korea; <sup>4</sup>Inje University Sanggye Paik Hospital, Department of Pediatrics, Seoul, Republic of Korea; <sup>5</sup>Hallym University Sacred Heart Hospital, Department of Pediatrics, Anyang, Republic of Korea; <sup>6</sup>Korea University Guro Hospital, Department of Pediatrics, Seoul, Republic of Korea; <sup>7</sup>Inje University Seoul Paik Hospital, Department of Pediatrics, Seoul, Republic of Korea; <sup>8</sup>Kangbuk Samsung Hospital, Sungkyunkwan University College of Medicine, Department of Pediatrics, Seoul, Republic of Korea; <sup>9</sup>National Health Insurance Corporation Ilsan Hospital, Department of Pediatrics, Goyang, Republic of Korea
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 Dr Behcet Uz Children's Hospital, Pediatric Allergy, Izmir, Turkey

POSTERS



**The development of childhood asthma: risk factors and family history**

Hassaini, S<sup>1</sup>; Al-Frahy, A<sup>2</sup>; Shakoor, Z<sup>3</sup>; Gad-El-Kab, M<sup>4</sup>  
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