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Risk factors for preschool wheeze hospitalizations in Chinese preschool children

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Introduction

Wheeze has been reported to affect one-third of preschool children. While different wheeze patterns have been shown to predict future asthma risk, limited data are available on the risk factors for preschool wheeze and wheeze patterns in Asia.

Objectives

To study the risk factors of severe preschool wheeze in Hong Kong.

Methodology

Preschool children admitted to hospitals via emergency departments for wheeze from 2004 to 2013 were identified from electronic data base. Admissions were correlated to changes in environmental and demographic risk factors in Hong Kong over the same period. A subgroup analysis was performed, where patients born between 1st January 2004 and 31st December 2007 were captured and their wheeze patterns in first 6 years of life were analyzed.

Result

Hospitalization for preschool wheeze has increased by 94% in the last 10 years. Wheeze was more likely to occur in boys (M:F ratio, 1.86:1). Late preterm birth was positively associated with wheeze admission. Of all preschool wheeze, 78% were transient, i.e. wheeze resolved after 3 years of age. Number of wheeze before 3 years and age of first wheeze were risk factors for persistent wheeze.