

## RISK FACTORS ASSOCIATED WITH ASTHMA DIAGNOSIS IN A COHORT OF CHILDREN FROM 5 TO 7 YEARS OLD

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### Abstract

Analyze risk factors associated to asthma diagnosis in a cohort of children from 5 to 7 years old that presented wheezing among the first two years of live.

### Key words:

Wheezing, infant, asthma..

### Introduction

Wheezing infants includes children from 2 to 3 years old who present episodes of wheezing lasting more than one month or more than 3 episodes in the interval of at least two months. There are risk factors that may influence the onset or development of symptoms such as genetic, environmental, viral infections, vitamin D deficiency in the first years of life, and gestational factors. These factors are related to the different phenotypes that range from the transient wheezing infancy exclusively triggered by viruses to the infant diagnosed with asthma.

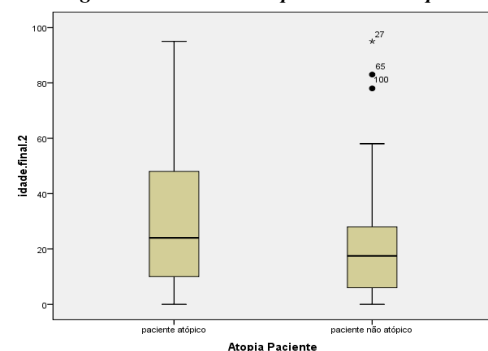
### Results and Discussion

It was analyzed 180 medical reports with complete information about atopy and 60% were male patients. One hundred and forty four children were considered atopic while 66 as non-atopic. Data analysis indicated that atopic patients wheezed longer than non atopics ( $p=0,014$ ). The mean of wheezing among atopic was  $31,27 \pm 26,2$  months, while those non-atopic  $21,20 \pm 20,2$  months. No relevant statistic difference was established considering the beginning of the wheezing on these two groups. Studying risk factors, was not verified association between asthma and sex, ethnicity, origin, pneumonia, gastroesophageal reflux disease, type of delivery, smoking, socioeconomic condition, breastfeeding, bronchiolitis and daycare frequency. However, in asthmatic patients 65.8% were male, 43.9% urban origin, 48.7 % were born of cesarean section, 19.5 % were small for gestational age, 12% had perinatal bronchodysplasia, 73.1 % were breastfed, 68.2% had acute viral bronchiolitis, 58.5% had pneumonia, 21.9% with gastro esophageal reflux, 43% exposed to tobacco and 43,9% attended daycare. In this study, it was verified that the male sex was more prevalent as shown on other studies<sup>(1)(2)</sup> that can be explained by the smaller airway size in this gender.

According to Lima et al<sup>(1)</sup> the average age of onset of wheezing was 5.16 months which is similar to our finding that is 5.59 months. According to the same study, only 24% of those characterized as wheezing infants attended daycare, while our prevalence was 43.9%. As type of delivery, it was found that cesarean delivery is configured as a protective factor for wheezing<sup>(2)</sup>, although in our study 48.7% of the patients that develop asthma were born of this kind of birth. Chong Neto et al

<sup>(3)</sup> in their study found that exposure to tobacco smoke after birth is not associated as a risk factor, but Medeiros et al<sup>(4)</sup> found a significant relationship between these two factors. In our study there was no significant statistical correlation although 43% of our patients who developed asthma had been exposed to tobacco. Exclusive breastfeeding in the first months of life is considered in some studies as a protective factor for wheezing<sup>(2)(3)(5)</sup> which, however, was not confirmed in our study.

Figure1: *Wheezing duration between atopics and non atopics*



### Conclusions

The time wheezing was higher in atopic patients, but the age of onset of symptoms had no difference between asthmatic and non asthmatic patients. The study was not able to determine risk factors associated to asthma diagnosis

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