

Inflammation and clinical immunology

0087

Seasonality of RSV hospitalization¹

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Background: Data on RSV seasonality in Poland is limited. In order to better assess epidemic season (both for active and passive immunization) studies on this subject are needed.

Material and methods: We retro-analyzed 513 hospitalizations in children due to RSV infections from January 2010 to July 2017. Median age of patients hospitalized was 2.8 months, age ranged between 8 days and 10 years. 96% (493/513) of children hospitalized was under 1 year of age, while only 7 patients were above the age of 2 years (1.4%). Epidemic season was defined, according to other researches, as the week when at least 2% of the total number of positive RSV results (per year) were seen. In order to analyze previously described correlation between the weather conditions and virus seasonality, additional data from the Institute of Meteorology and Water Management (IMWM) will be presented.

Results: The total number of children hospitalized in 2010-2016 period was (by year) as follows: 30, 57, 49, 97, 68, 65, 51 and 96 during first half of 2017. The RSV (hospitalization) epidemic season in Warsaw starts from 50th week of the year (beginning of December) and lasts until 15th/16th week of the year, i.e. mid April. During that period, the highest mean percentage of RSV hospitalizations was 8.4% in 8th week of the year, while peak season is observed between 4th and 8th week of the year (6.6 to 8.4% of the total number of hospitalizations per each year). The highest percentages during the observation periods were 10th week of 2010 (16.7%), 4th week of 2011 (15.8%), and 6th week of 2015 (13.8%).

Conclusions: Despite annual fluctuations, the seasonality of RSV hospitalizations at Bielanski Hospital was rather fixed, with December to April being peak season. Any further consideration on RSV passive or planned active prevention strategies should take into account the highest risk period.

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