VIRAL PATHOGENS CAUSING ACUTE LOWER RESPIRATORY TRACT INFECTIONS IN CHILDREN UNDER 5 YEARS OLD IN BULGARIA

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Introduction
Influenza A/B viruses, respiratory-syncytial virus (RSV), human metapneumovirus (HMPV), parainfluenza viruses (PIV, type 1/2/3), rhinoviruses (RV), adenoviruses (Adv), bocaviruses (BoV) are involved in the development of acute lower respiratory infections (LRTI) in young children.

This study aimed to determine the viral aetiology of LRTI infections in children younger than 5 years of age during two successive epidemic seasons in Bulgaria.

Methods
- 387 nasopharyngeal swabs of children under the age of 5 were tested. Children were either outpatients, or hospitalized for acute lower respiratory tract infections (LRTI) in different regions of the country.
- During the 2016-2017 season, 230 children were tested, during the 2017-2018 season - 157; 8 (2%) among them were outpatients, and 379 (98%) hospitalized.
- The age of the patients varied from 30 days to 60 months (average 21.53 ± 12.54 months).
- 223 (59.9%) participants were boys, and 155 (40.1%) - girls.
- All study patients express complications like laryngotracheitis, bronchiolitis or pneumonia.
- Viral aetiology was determined by Singleplex Real Time PCR against 11 respiratory viruses.

Results
Of the 387 children examined, 288 (74%) were positive for at least one respiratory virus.
- 57 patients were co-infected with 2 viruses, six were positive for 3 viruses.
- In 45 (11.6%) of patients samples were detected influenza viruses - A(H3N2) (7%), type B (3.4%) and A(H1N1)pdm09 (1.3%)
- During the 2016/2017 season, detection rate of RSV was higher compared to 2017/2018 season (47% vs 15%). RSV subgroup B outnumbered those of the subgroup A in both seasons.

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