SESSIONE 15 INFEZIONI VIRALI RESPIRATORIE

LE INFEZIONI RESPIRATORIE CAUSATE DA VIRUS RESPIRATORIO SINCIZIALE: UN PROBLEMA SOLO PEDIATRICO?

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Introduction

Respiratory syncytial virus (RSV) is the most common cause of infant hospitalization for acute bronchiolitis and older children pneumonia. The clinical spectrum of RSV infection is broad and varies from mild upper respiratory illness to a severe lower respiratory tract disease. Almost all children are exposed to RSV during the first two years of life; of these, only a fraction will require hospitalization due to a severe clinical course. Known risk factors associated with severe bronchiolitis are very young age, premature birth, underlining chronic diseases; nevertheless, most children hospitalized for bronchiolitis were previously healthy. There is evidence that a severe disease is caused by both the direct virus induced airway damage and the inflammatory host response. Moreover, RSV subtype or genotype may influence the clinical presentation and disease severity. RSV was shown also as a relevant cause of elderly hospitalization for pneumonia and of outbreaks in intensive and long-term care units.

Methods

Within Italian Association of Clinical Microbiologists, a study group named Gruppo di Lavoro sulle Infezioni Virali Respiratorie (GLIViRe) has been formed including 9 different centers. GLIViRe aims to evaluate RSV burden of disease analysing data on RSV seasonal circulation and impact on different age groups and clinical entities; moreover, virologically characterization of these cases will provide data also on other respiratory viruses.

Results

Overall, from December 2018 throughout April 2019, GLIViRe tested more than 11000 respiratory samples for RSV, with molecular techniques, using either commercial kits or home-made rt-PCR/Real Time rt-PCR. Most centres extended RSV characterization at the level of virus sub-typing and several also provided data on genome sequencing. Overall, RSV was detected in about 1300 respiratory samples (12%), of which 20% were in co-infections with other respiratory viruses. About half of the total RSV-positive cases were infants up to 1 year of age whereas RSV-positive elderly patients accounted for about 22% of the total. RSV epidemic peak was registered at the end of January/start of February. Nearly, two hundred RSV-positive samples were genotyped, resulting in nearly 60% of cases attributed to RSV-B. GLIViRe analysed data on Metapneumovirus (MPV), that was found in about 2% of total samples of which 33% were in co-infections.

Conclusions

This first GLIViRe study resulted in interesting data on RSV and MPV seasonal patterns, diffusion of genotypes among different age groups and illnesses, at the national level. These collaborative studies address the need to provide good data for the European RSV surveillance system to be implemented. Knowledge on RSV burden of disease may help decisions on monoclonal antibodies-based prophylaxis and future vaccination strategy.