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Abstract (poster session)

Human enterovirus and human rhinovirus acute respiratory tract infections in hospitalised paediatric patients, France, 2009-2010

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Objective: To assess the etiological role and the clinical characteristics of HRV and HEV infections in pediatric patients hospitalized for ARTIs. **Methods:** RT-qPCR assays and molecular sequencing methods were used to identify HRV and HEV strains in nasopharyngeal aspirates of 309 hospitalized pediatric patients with microbiologically unexplained ARTIs and in 210 hospitalized pediatric patients without respiratory symptoms from September 2009 to June 2010 in France. **Results:** Among the 309 ARTI cases, 15 HEV and 172 HRV strains were identified whereas only 1 HEV and 37 HRV strains were observed in control patients (187 vs. 38: $P < 10^{-3}$). HRV strains were identified in 150 of the 164 lower ARTIs whereas HEV strains were identified in only 14 of these cases. Among bronchiolitis and asthma exacerbation cases ($n=133$), HEV infected cases were older (Median age (years) 3 vs. 0.9, $P=0.003$) and were more frequently associated with a respiratory distress ($P=0.01$) and a need for oxygen therapy at the time of admission ($P=0.01$) than cases infected by HRV strains. **Conclusion:** HRV and HEV strains were identified as potential etiological causes of 60.5% of microbiologically unexplained ARTIs diagnosed in hospitalized pediatric cases. A higher clinical severity was observed in HEV infected bronchiolitis or asthma exacerbation cases in comparison to HRV infected cases.