Hospitalization Rate of Respiratory Syncytial Virus associated Acute Lower Respiratory Infection among Young Children in Suzhou, China, 2010-2014

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December 5, 2021

Abstract

Background: Data on disease burden of respiratory syncytial virus (RSV) associated acute lower respiratory infection (ALRI) among young children are limited in China. This study aimed to estimate the hospitalization rate of RSV-associated ALRI (RSV-ALRI) among children aged 0˜59 months in Suzhou, China. Methods: We retrospectively identified all hospitalized ALRI children aged 0˜59 months in Suzhou University Affiliated Children's Hospital during January 2010 to December 2014. Detailed diagnosis and treatment data were collected by individual medical chart review. Referring to WHO influenza disease burden estimation method, we estimated the hospitalization rate of RSV-ALRI among children aged 0˜59 months in Suzhou, China. Results: Among 28,209 ALRI cases, 19,317 (68.5%) were tested for RSV and the RSV positive proportion was 21.3% (4,107/19,317). The average hospitalization rate of RSV-ALRI for children aged 0˜59 months was 14 (95% confidence interval [CI]:14˜14)/1,000 children-years, for children aged 0˜5, 6˜11, 12˜23, and 24˜59 months were 70 (95%CI: 67˜73), 31 (95%CI: 29˜33), 11 (95%CI: 10˜12), and 3 (95%CI: 3˜3) /1,000 children-years, respectively. Conclusion: There is considerable RSV-ALRI hospitalization among children aged 0˜59 months, particularly among children aged <1 years. An effective monoclonal antibody or vaccine is urgently needed to address the substantial hospitalization burden owing to RSV infection. Key words: Respiratory syncytial virus, Hospitalization rate, Acute lower respiratory infection, Children, China

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Running Title: Hospitalization Rate of RSV-ALRI

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