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Epidemiology of invasive group B streptococcal disease in infants in southern mainland China, 2011-2014

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Group B Streptococcus (GBS) is a leading infectious cause of neonatal morbidity and mortality in many countries, while the disease burden in China is almost blank. We investigated the epidemiology of invasive GBS infection to appraise the necessity of implementation of appropriate interventions. Data for infants less than 3 months old with culture-positive GBS were retrospectively collected from three large urban tertiary hospitals in Guangdong, southern mainland China from January 2011 to December 2014. Of the 127206 live births in the three hospitals, 70 cases of culture-confirmed invasive GBS infection were identified with the overall incidence of 0.55 per 1000 live births (95% CI 0.44-0.69). The incidence among infants less than 6 days was 0.39 per 1000 live births (95% CI 0.29-0.51) and increased significantly from 0.12 per 1000 live births in 2011 to 0.58 per 1000 live births in 2014 ($P < 0.05$). The incidence remained stable among infants aged 7 days through 89 days during the study period (mean, 0.16 per 1000 live births). 84 additional GBS cases were confirmed in the study hospitals but were born elsewhere. Among the total 154 cases, 9 deaths (5.8%) occurred before discharge and 18 cases (12.4%) experienced neurological sequelae. All 154 isolates were susceptible to penicillin, ampicillin and vancomycin, while frequently resistant to erythromycin (75.6%) and clindamycin (38.5%). In the 68 isolates tested, serotype III (76.5%) was the most commonly identified, followed by Ib (14.7%), V (4.4%) and Ia (4.4%). This study concluded that incidence of neonatal invasive GBS infection in southern mainland China was higher than previously anticipated and increased significantly during the study period, especially early-onset disease. Standardized preventive measures against GBS should be adopted.

Biography

Haiying Liu has completed her PhD from Second Military Medical University. She is the Director of Clinical Laboratory, Guangzhou Women and Children's Medical Center, Guangzhou Medical University, Guangzhou, Guangdong, China.

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