

EDITORIAL

Establishment of an enterovirus surveillance system is a high priority for prevention of pediatric viral encephalitis and meningitis in China

The journal published an original article whose focus was detection of viral pathogens in the cerebrospinal fluid of patients showing symptoms of viral encephalitis or meningitis in Hebei Province, China from 2013 to 2015.¹ The results indicated that enterovirus was the most common etiological agent of viral encephalitis and meningitis, highlighting the importance of strengthening enteroviral encephalitis and meningitis surveillance among children. Remarkably, echovirus 18 became the major pathogen responsible for causing both viral encephalitis and meningitis in Hebei Province in 2015. Owing to the paucity of reports on echovirus 18, continuous surveillance is absolutely necessary to understand the distribution and genetic characteristics of echovirus 18 in China.

Viral encephalitis and meningitis are common infectious diseases of the nervous system. A variety of viruses, including enterovirus, Japanese encephalitis virus, mumps virus, adenovirus, herpes simplex virus and others, can directly invade the brain parenchyma and cause encephalitis and meningitis; among these viruses, enterovirus has become one of the most common pathogens in China. enteroviral encephalitis and meningitis are typically severe diseases conferring high morbidity and mortality in children.² Currently, over 100 serotypes of enterovirus have been reported, and disease severity varies by serotype. Readers may have noted that enterovirus isolates from 27 viral encephalitis and meningitis cases in this study were untyped. For these cases, further serotype/genotype analyses are required.

Taking into account the harmfulness of encephalitis and meningitis, the National Science and Technology Major Project has implemented a sentinel surveillance system for five major infectious syndromes, including encephalitis and meningitis syndromes, and enterovirus is included as one of the surveillance pathogens.³ Through this surveillance system, we can understand the spectrum of pathogens responsible for encephalitis and meningitis

syndromes in China, their distribution, the burdens of disease they impose, and dynamic changes in pathogen frequency. Similar to the results of this study, our surveillance data showed that enterovirus is one of the most important pathogens causing viral encephalitis and meningitis.⁴

However, the project described above is only a phase-based surveillance study, and a nation-wide surveillance system for pediatric viral encephalitis and meningitis should still be established. This would represent an essential and effective tool for identifying emerging and re-emerging enterovirus outbreaks and epidemics. Comprehensive surveillance data would provide a scientific basis for planning and executing public health interventions for enterovirus-related encephalitis and meningitis and contribute to the goal of achieving a healthy China.

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CONFLICT OF INTEREST

I have no conflict of interest to declare regarding this manuscript.

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A brief introduction to Gansu Provincial Maternity and Child-care Hospital

Gansu Provincial Maternity and Child-care Hospital was founded in 1942. It was formerly known as Gansu Provincial Senior Midwifery Vocational School Affiliated Hospital, Gansu Maternal and Child Health Hospital, and Gansu Obstetrics and Gynecology Hospital. In 1978, it was officially renamed Gansu Provincial Maternity and Child-care Hospital. The current site will be constructed with a total construction area of 43 993 m² and additional 300 beds would be opened. In 2012, the first phase of the comprehensive building of health care and medical treatment was completed and used, with 1 000 open beds and a building area of 59 783 m². In December 2014, the second phase of the emergency building was completed and put into use. The building area was 21 375 m², August 2015, Gansu Children's Medical Center business building started construction with a planned construction area of 35 771 m².

In 2017, the number of outpatient visits of the hospital was 1.5478 million person-times and 75 967 person-times were discharged. All medical indicators showed an upward trend year by year, and the bed occupancy rate was over 110%. There are 1 407 professional and technical personnel of various types, including 189 of them with the high academic titles.

In recent years, the hospital has launched a number of new technologies: Pediatric bronchoscopy and guided lung interventional techniques, high frequency oscillatory pulmonary function tests, bronchodilator and provocation tests, pediatric electronic endoscopy interventional treatment technology, endoscopic retrograde cholangiopancreatography (ERCP) technology, pediatric surgical mirror technology, neonatal thoracoscopic minimally invasive techniques, cardiology percutaneous non-invasive ultrasound-guided congenital heart disease occlusion, peripheral vascular intervention therapy, infant transplantation, bone marrow biopsy, and solid tumor chemotherapy, children's rare genetic disease high-throughput gene detection technology, neonatal genetic metabolic disease tandem mass spectrometry screening technology, mild hypothermia treatment of neonatal hypoxic-ischemic encephalopathy, neonatal exchange transfusion therapy, neonatal amplitude-integrated electroencephalography, children's ECMO extracorporeal membrane oxygenation techniques newborns and continuous blood purification treatment of children CRRT technology (liver replacement, renal replacement, plasma exchange and tandem technology), umbilical arterial catheterization technology, high-frequency oscillation ventilation, inhalation of nitric oxide, bedside hemodynamic monitoring, bedside cranial nerve function monitoring, deep arteriovenous and PICC catheterization, neonatal eye disease screening (including ROP screening), adolescent near-angle film shaping mirror prevention and control, correction of malocclusion and oral implant technology, infants ENT disease treatment and other services.

Gansu Provincial Maternity and Child-care Hospital is a non-profit public health care institution directly subordinate to the Health and Family Planning Commission of Gansu. It is among the first batch of baby-friendly hospitals awarded by the National Health and Family Planning Commission, and the only 3A Maternal and Child Health Hospital in Gansu Province. The hospital always adheres to the principle of “health-centered, health-care-oriented, health-clinical, grassroots-oriented, community-oriented, and prevention-based” services, and adheres to the principle of “children’s priorities, mother’s safety”.

Gansu Provincial Maternity and Child-