INVESTIGATE AN OUTBREAK OF PROVIDENCIA STUARTII INFECTIONS AT A NURSING HOME

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Purpose: At a regional hospital in northern Taiwan, on 19 March 2013, a strain of imipenem-intermediate Providencia stuartii (P1) was isolated from pus of a patient came from a nursing home. On 12 May and 18 June 2014, three strains of imipenem-intermediate P. stuartii (P2, P3, and P4) were also isolated from urine and blood of two different patients came from the nursing home. P3 and P4 were isolated from urine and blood, respectively, of the same patient. Hence, this study was conducted to investigate an outbreak of P. stuartii infections.

Methods: Pulsed-field gel electrophoresis (PFGE) was used for bacterial typing. PFGE patterns were interpreted as same (no band difference), similar (≤3-band differences), or different (≥4-band differences) strain.

Results: PFGE patterns revealed P1 and P3/P4 were the similar strain, those were different from P2. P3 and P4 were the same strain.

Conclusions: As a result of this study, PFGE confirmed that this was a true outbreak of imipenem-intermediate P. stuartii infections at a nursing home. Although monitoring antibiotic-resistant organisms and intervention of infection control measures are one of important measures to reduce antibiotic-resistant organisms, we suggest those should be performed not only in hospitals but also in long-term care facilities in order to get better effect.

CLINICAL OUTCOMES OF PATIENTS WITH KLEBSIELLA PNEUMONIAE OUTBREAK ISOLATES HARBORING A NOVEL KPC-17 VARIANT IN SOUTHERN TAIWAN

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Purpose: In 2014, an outbreak of KPC-17-containing K. pneumoniae (KPC-17-KP) occurred in a regional hospital in southern Taiwan. Until July 31, a total of 39 KPC-17-KP isolates were recovered, causing 33.3% mortality rate. We aimed to describe the clinical characteristics and outcome of these episodes involving KPC-17-KP isolation.

Methods: We retrospectively reviewed the demographic data (age, sex, and nursing-home resident), source of infection, days of hospital stay before onset of acquiring KPC-17-KP, previous carriage of isolates with extended-spectrum β-lactamase (ESBL) or AmpC phenotype within 3 months, recent hospitalization with 3 months, specific antibiotic therapy, in-hospital death and days of outcome from acquiring KPC-17-KP.

Results: There were 17 women, 22 men, age (mean, standard deviation) 83 years; range, 47–102), 23 (60%) chronic nursing-home residents, 23 nosocomial isolates after a mean hospital stay of 12 days (range, 2–47), 14 nursing-home acquired isolates and 2 community-acquired isolates. Recent hospitalization or previous carriage of ESBL/AmpC isolates within 3 months occurred in 24 (61.5%) patients. Among 3 blood isolates, 1 each was primary, from pneumonia and from urinary tract infection (UTI), resulting in 2 deaths (66.7%). Among 17 sputum isolates, 8 were from pneumonia (9 colonization), resulting in 7 deaths (41.2%). Among 19 urine isolates, 15 were from UTI (4 colonization), resulting in 4 deaths (21.1%). Effective colistin-based antibiotic therapy was given to only 6 episodes (15.4%) with 3 survivors. 13 patients died in hospital after a mean of 12 hospital days (range, 1–24) from onset of acquiring KPC-17-KP.

Conclusions: The KPC-17-KP caused 26 (66.7%) significant infections and 13 deaths (33.3%). Mortality was not significantly related to effective colistin-based therapy (p = 0.38).

INVESTIGATION OF UPPER RESPIRATORY TRACT INFECTION OUTBREAK IN AN ACUTE PSYCHIATRY WARD OF A MEDICAL CENTER

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Purpose: Self care of psychiatric patients was poorer than the general people. Contagious infections (like flu) once happened, it was likely to cause cluster infection. Apart from the patients in the hospital, the staffs may also be sources of infection. Eleven staff members and 12 patients had upper respiratory tract infection symptoms in acute psychiatric wards from February 22 to March 22 in 2014. Person, time and place related investigations were held to clarify the source of infection as soon as possible and avoid the epidemic spread.

Methods: 11 staffs and 12 patients started to appear symptoms of fever, cough and sore throat. We suspected flu or Mycoplasma infection, so specimens were collected for examination. Infection control measures included: 1. Keep droplet precautions and restrict activity areas of patients. 2. Stop new patient admission. 3. Ask healthcare personnel to wear surgical mask and wash their hands. 4. Enhanced environmental disinfection. 5. Monitor the health status of patients, visitors and staffs.

Results: Total 15 specimens were examined. One staff member and one patient were positive for influenza A antigen, and 5 patients had high titer values of Mycoplasma IgM, and one patient had low positive titer of Mycoplasma IgG. We concluded the outbreak was flu A, but the possibility of Mycoplasma infection could not be ruled out.

Conclusions: The causes of this cluster infection included staff member did not inform fever immediately, and lack of timely intervention measures. Though we had body temperature monitoring system in our hospital and the ward unit also had standard measures of unusual infections. Neglect to inform early to lead to spread of the infectious disease. Health monitoring of implementation and management measures were needed. Once infection occurred, early detection and notification, identifying the pathogen and effective isolation should be done to prevent cluster infections.
environmental sampling, including hand of doctor and nurse, bedside and disinfectants. However no Chryseobacterium spp. could be yielded from environmental samples. We traced the patients with Chryseobacterium yielded from blood culture but no obvious infection focus was noted.

Conclusion: Unusual number of Chryseobacterium from the blood culture result was found but negative in environmental sampling or infection focus survey.

THE PRELIMINARY SURVEY FOR THE SURVEILLANCE OF HAEMOPHILUS INFLUENZAE (H. INFLUENZAE) IN A REGIONAL HOSPITAL FROM MAY TO AUGUST, 2014
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Purpose: The hospital isolated H. influenzae from sputum specimen from May to August, and the isolation rate grew exponentially when comparing with that(0.33%) in the same period of the past two years. For realizing the situation, patients’ general conditions were collected to be as the reference of epidemic prevention measures.

Methods: The survey was carried out retrospectively, by collecting the data of the patients who were examined H. influenzae out of sputum specimen. The data included their origins, ages, the causes of disease, and antibiotic sensitivities.

Results: 23 patients infected H. influenzae which was cultured from sputum and the isolation rate was 1.52%(23/1512). The patients from long-term care centers accounted for 39.1%(9/23). Their average age was 65 and males were vast majority(78.3%). None of them belonged to the cases of healthcare-associated drug resistance were Bactar(52.2%), Levofloxacin(43.5%), and 13.0%(3/23). None of them belonged to the cases of healthcare-associated infection. Therefore, the chance to cause the disease will increase obviously if one lives in crowded environment.

Conclusion: Although H. influenzae commonly appears in the respiratory tract and belongs to opportunistic infection, it can cause the disease when hypoinnimity or it breeds numerous. Secondary respiratory tract infection may happen to the elderly people aged over 65, its spreading way is droplet transmission. Therefore, the chance to cause the disease will increase obviously if one lives in crowded environment.

INVESTIGATION OF A CLUSTER OF BULKHOLDERIA CEPACIA COMPLEX INFECTION IN A PEDIATRIC INTENSIVE CARE UNIT
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Purpose: Background: Bulkholderia cepacia complex (Bcc) is a group of ubiquitous gram-negative aerobic bacilli found in plants, soil, and moist environments. Bcc is well described as a cause of respiratory infections in patients with cystic fibrosis and chronic granulomatous disease. Bcc bacteremia and nosocomial pneumonia have also been observed in intensive care patients as sporadic cases or during outbreaks, but rarely reported in pediatric ICU.

The outbreak: During September 15, 2012 and October 17, 2012, four pediatric cases of healthcare-associated B. cepacia complex infection, two with bacteremia and two with pneumonia, were identified in our PICU, in which none had this microorganism HA infection in previous six months. We conducted an investigation and intervention procedures.

Methods: Investigation and interventions: Prior to Bcc infection, three of these 4 cases ever received a bronchoscope examination. On October 23, we obtained 54 specimens from environmental objects and instruments, including 16 specimens from the bronchoscope examination room, 31 specimens from PICU and 7 specimens from respiratory therapy department, and sent them for detection of this organism. Hand hygiene, environmental cleaning and disinfection, and cleaning and disinfection procedures for bronchoscope were augmented.

Results: None of the 54 specimens yielded Bcc but glucose non-fermentous bacilli and Enterobacteriacea were identified from 4 specimens, including inner surface of bronchoscope washing machine, post-filtration water, one人民是推荐的。