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20.002

Secondary data analysis of national influenza reference laboratory, Abuja, Nigeria, May, 2015

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Purpose: Influenza viruses A/B are responsible for epidemic of respiratory illnesses associated with increased rate of hospitalization while the highly pathogenic avian influenza causes huge economic loss/death. Objectives of the analysis are: To describe the seasonality of influenza, determine the circulating virus strains, determine the trend of the virus in Nigeria and provide recommendations.

Methods & Materials: The primary sources of data are the four sentinel sites (Abuja, Kano, Nnewi and Lagos). Influenza surveillance data collected from April 2008 to July 2014 was cleaned and analyzed using Epi-Info version 3.5.1. Analysis of result by age-group, sex, site, trend, and influenza types, subtypes and type of case was conducted.

Results: A total record of 11199 collected from April 2008–July 2014 documented. Influenza virus type A (FluA) was 662 (5.9%), (FluB) was 392 (3.5%) and negatives were 10185 (90.9%). The subtype of Influenza A pdm(09), AH1N1 was 261(2.30%), A/H1 is 15(0.10%), A/H3 277(2.50%), subtyped were 48(0.40%), unsubtypeable were 413 (3.70%). Female had 460 (0.46%) both FluA/B, male had 539 (0.54%) FluA/B. Type of case were ILI 9011 (80%), SARI 2096 (18%), Novel H1N1 27 (0.2%), and AI 4 (0.04%). Age-group with the highest number of positive was 1–10 with 853. State with the highest positive was Abuja 3325(29.8%) followed by Kano 3507(31.4%), Lagos 2729 (27.29%) and Nnewi 1604(14.4%). The highest peak of Influenza activity with a subtype A/H3 was in 2012, while pdm (09) AH1N1 was the highest in 2010, while A/H1 has diminished with little activity in 2009 and 2010.

Conclusion: Thus, surveillance is effective in picking the circulating and trend of virus. The need for collaboration between the animal and human aspect of influenza surveillance to be fully integrated is highly recommended to enable track new strain of influenza virus. Sharing of data gathered between ministry of Agriculture and Health will also help in future planning.

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20.003

Screening of respiratory virus PCR panel in adults with CNS infectionS.J. Ahn^{a,*}, J.-S. Sunwoo^b, H.S. Lee^a, J.-A. Lim^a, J. Moon^c, S.T. Lee^a, K.-H. Jung^a, S.K. Lee^a, K. Chu^a^a *Seoul National University Hospital, Neurology, Seoul/KR*^b *Soonchunhyang University Seoul Hospital, Neurology, Seoul/KR*^c *Seoul National University Hospital, Seoul/KR*

Purpose: Respiratory viruses including adenovirus, respiratory syncytial virus (RSV) A, B, rhinovirus A/B, coronavirus, Influenza A, B, parainfluenza 1, 2, 3 and metapneumovirus are well known causes of upper respiratory infection in infants and young children. There are a few reports on meningitis or encephalitis associated with respiratory viruses but most of them are pediatric cases. We now demonstrate some cases of central nervous system (CNS) infection with respiratory virus in adults which are diagnosed by respiratory virus (RV) PCR panel.

Methods & Materials: We reviewed the registry for central nervous system infection between 2000 and 2015 at the Seoul National University Hospital, and identified patients with positive for RV PCR panel in sputum or CSF. We analyzed the clinical presentations, laboratory findings, and outcome.

Results: Out of total 681 patients in registry, 253 (37.1%) were viral infection. Among them, 10 patients (4%) showed positive results for RV PCR panel including Influenza A, Influenza B, rhinovirus A/B, parainfluenza virus, corona virus, RSV A and metapneumovirus. Three were positive in CSF, six were positive in sputum. Median age was 38 (range from 21–72).

Four patients clinically presented as encephalitis including all three patients with CSF PCR positive results. Other six patients clinically presented as meningitis. Six patients (60%) complained URI symptoms prior to neurologic manifestations. All patients showed pleocytosis in the CSF findings, and mean WBC count was 229.2. 70% of patients showed lympho-dominant pattern. Magnetic resonance imaging (MRI) of seven (70%) patients revealed abnormality as leptomeningeal enhancement. Most of the patients (90%) had good prognosis even with encephalitis. One encephalitis patient with positive influenza A in CSF was clinically deteriorated despite of multi antiviral therapy.

Conclusion: We identified that CNS infection related to respiratory viruses is rare, however does exist not only in children but also in adult. Even though most patients showed good response to antiviral therapy, some patients would have higher chance of bad outcome especially with positive PCR in CSF. Screening of CSF and sputum RV PCR panel in adults with CNS infection would be helpful for proper etiological diagnosis.

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20.004

Detection of rhinovirus-associated asthma exacerbations using reverse transcriptase - polymerase chain reaction in Egyptian childrenM. El-Seify^a, M.M.A.M. Al-Fahham^{b,*}, N. Salah El-Deen^c, S. El-Nashar^a^a *Ain Shams University, Pediatrics, Cairo/EG*^b *Ain Shams university, Pediatrics, Kuwait/KW*^c *Ain Shams University, Medical Microbiology and Immunology, Cairo/EG*

Purpose: Acute exacerbations of asthma are the leading cause of emergency department visits in pediatric patients. The development of sensitive diagnostic polymerase chain reaction (PCR) based techniques permitted demonstration of an already clinically suspected association between common viral respiratory infections and asthma exacerbations. Respiratory viruses have been identified in 80–85% of exacerbations in school-aged children, with human rhinoviruses (HRVs) being the most frequently detected. A recently identified HRV genotype, HRV-C, is circulating worldwide and is an important cause of febrile wheeze and asthmatic exacerbations in children requiring hospitalization.

This study aimed to detect HRV- induced asthma exacerbations (including the new HRV-C genotype) among a group of Egyptian children

Methods & Materials: This cross sectional study was conducted on 31 asthmatic children in exacerbations in the period from September, 2014 till October, 2015. Patients were recruited from the emergency department and chest clinic, Children's hospital, Ain Shams University. Sputum (for children ≥7years) and nasopharyngeal aspirates (for infants and children <7years) were collected for one-step, real-time pan Rhinovirus reverse transcription