

Project Title: The epidemiology, clinical feature and viral factor of influenza-associated encephalitis/encephalopathy in Taiwan

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Abstract:

Background. Despite respiratory tract infection, a variety of neurologic involvement is known to be associated with influenza infection. However, the incidence and clinical presentation of influenza associated neurologic involvement has not been reviewed and documented in Taiwan.

Method. Severe influenza infection was requested to report to centers for disease control in Taiwan since 2002. Medical records of all confirmed severe influenza infection cases were reviewed to find out those with neurologic involvement. The demographic and clinical characteristics, laboratory results, and image studies of cases of the influenza-associated neurologic illness were recorded and analysed.

Results. During January 1 2002 to Dec 31 2006, a total of 298 cases of severe influenza infection cases were reported. Among these, 19 cases presented with neurologic manifestation. The incidence was 0.165 per 100 thousand annually, which didn't show significant difference among the study period. There is no significant difference between the incidence in boys and in girls. All the 19 cases were children. The mean age of the 19 children was 5 years and 11 months, with the youngest aged 1 year and 7 months and the oldest aged 12 years and 8 months. Medical records were available for 18 of the 19 cases. Among these 18 cases, 12 cases survived and 6 expired. Apparent brain edema and uncal herniation were noted in 2 expired patients on CT image. Among these 18 cases, 9 cases were caused by influenza A and 8 cases were caused by influenza B. No confirmed Reye's syndrome cases were found.

Conclusion. Neurological manifestation was a rare complication of influenza infection in Taiwan. It most occurred in children. The clinical presentations of influenza-associated neurologic manifestation are diverse, from mild perceptual abnormality to lethal illness. Continue current influenza associated encephalitis/encephalopathy is important.

Key words: influenza virus, severe influenza, encephalopathy, necrotizing encephalitis