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Influenza associated neurological complications - clinical course and prognostic factors

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Introduction & Aim: Acute influenza-associated encephalopathy/encephalitis (IAE) in children and adults is not so common but very serious and sometimes fatal neurological complication. The purpose was to show clinical and laboratorial peculiarities in this condition and to indicate some prognostic factors.

Materials & Methods: In a period of three years (2014-2017) through the Clinic of Infectious diseases at University Hospital in Stara Zagora, Bulgaria seven patients with IAE were passed. They were aged between 3 and 37 years. Clinical, epidemiological, laboratorial and instrumental investigations were accomplished in all patients. The results were processed with statistical program SPSS for Windows, v. 14.

Results & Discussion: Clinical manifestations appeared in five patients with an initial convulsion usually within 24-72 hours after the acute onset of the disease and quantitative changes in consciousness to coma in three. There was no evidence of meningradicular irritation in any patient. Laboratory blood tests showed in three patients' elevated levels of leucocytes and aminotransferases, high urea, glucosis and creatinine. The findings of cerebrospinal fluid indicated albumin values from 1.0 to 3.0 g/l and increased glucose from 4.5 to 21 mmol/l. All of these three patients ended up with a fatal outcome. Their pathological outcomes detected necrotizing encephalopathy. The remaining four patients recovered completely without residual symptoms. The diagnosis was confirmed by clinical and epidemiological data, but also by serological (ELISA) in blood investigations and virological (PCR) in autopsy material in all but one influenza AH3N2 virus was detected. Influenza virus strain Victoria was detected with him. All patients were treated with oseltamivir in appropriate doses. None of them were vaccinated against influenza.

Conclusion: IAE had a well-known clinical course. Some extremely elevated laboratorial changes may predict a lethal outcome. IAE was a complication which could be avoided by specific vaccine use.

Biography

Liliya Pekova is a specialist of Infectious Diseases and Epidemiology. She is Head of the Department of Infectious Diseases of Medical Faculty, Trakia University, Stara Zagora, Bulgaria and a Chief of the Clinic of Infectious Diseases in the University Hospital in the same city. She has recently led a science project in the field of Viral neuro-infections with many different involving specialists.

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