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Lung alert

Influenza A resistance to oseltamivir

Oseltamivir is a neuraminidase inhibitor used for the treatment and prophylaxis of influenza A infections. This study investigated the differences in demographics, epidemiology, clinical symptoms, severity of illness and clinical outcomes among patients infected with oseltamivir-resistant or oseltamivir-susceptible influenza A (H1N1) virus in the USA. Information about viral isolates and their subtypes, particularly H1N1, was collected using data submitted to the Centres for Disease Control and Prevention by US public health laboratories. Data about illnesses from both groups were collected over the telephone using a standardised questionnaire.

142 out of 1155 cases of influenza A (H1N1) tested were resistant to oseltamivir. Data were collected from 99 oseltamivir-resistant patients who agreed to participate and 182 oseltamivir-susceptible cases. Among resistant patients the median age was 19 years; five patients (5%) were hospitalised and four patients (4%) died. The comparison of the two groups showed a similar prevalence of underlying medical conditions, age distribution and clinical symptoms, and it showed that circulating resistant viruses were unrelated to oseltamivir use.

The US nationally adjusted cases of oseltamivir-resistant influenza A (H1N1) in the 2007–8 season were estimated to be 2%; however, resistance increased in the early 2008–9 season, reaching 98.5% in 268 tested cases.

This study was limited by the small numbers of influenza A (H1N1) cases and differing methodologies for data collection. However, it highlights an important issue of the emergence of treatment-resistant influenza strains and the need for further antiviral development.

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