

V-648

Safety of Peramivir Accessed Under the FDA Emergency Use Authorization (EUA) to Treat Hospitalized Patients Infected with 2009 H1N1 Influenza Virus

A. F. SORBELLO, S. C. JONES, W. CARTER, K. STRUBLE,
Peramivir Safety Team;
US FDA, Silver Spring, MD.

Background: FDA authorized emergency access to peramivir, an unapproved intravenous antiviral drug, under an EUA to treat suspected or proven 2009 H1N1 influenza virus infection on October 23, 2009. Hospitalized patients unable to tolerate or unresponsive to conventional antivirals or lacking dependable oral or inhaled routes of drug delivery were eligible. The EUA mandated reporting of medication errors, selected adverse events (AE), serious AEs, and deaths to the FDA. **Methods:** An FDA safety team analyzed reports from the FDA Adverse Event Reporting System (AERS) and sought follow-up in selected cases. **Results:** Of about 1,250 peramivir releases through March 12, 2010, FDA received AERS reports on 237 patients (19 children and 218 adults, including 3 pregnant women). The cohort was not typical of all patients with influenza due to co-morbid disorders that compromised body organ or immune function and life-threatening progression despite oseltamivir therapy. Many patients were treated in the ICU and received mechanical ventilation (43%), hemodialysis (12%), and systemic antibacterials (30%). The most commonly reported AEs by preferred term were acute renal failure (9.3%), death (9.0%), and respiratory failure (8.9%). There were 3 reports of medication errors. Reported outcomes for the 237 patients included 118 deaths, but no fatalities were attributed to peramivir by reporters. Efficacy could not be assessed due to the lack of randomization to a comparable control group. **Conclusions:** No unusual drug-related safety signals were identified in this critically ill cohort where reported AEs occurred with a high background rate. Causality assessments were confounded by severity of illness, co-morbidities, and concomitant drugs. The safety analyses were limited by lack of randomized treatment allocation and AE under-reporting. Randomized clinical trials are recommended to assess the safety and efficacy of peramivir in hospitalized patients.