Oseltamivir Use In A Cohort Of Young Children In Bangkok, Thailand

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Objective: Thai clinical guidelines recommend oseltamivir for patients with severe influenza and a high risk of severe disease, including children aged <2 years. We examined predictors of oseltamivir use in children with acute respiratory illness (ARI).

Methods: From August 2011-November 2013, we prospectively enrolled an equal number of healthy and chronically ill aged 0-36 months at the Queen Sirikit National Institute of Child Health. Study nurses contacted caretakers weekly for two years to identify children with ARI (presence of ≥2 of fever/feverishness, cough, sore throat, and runny nose) and encouraged them to visit the hospital. Children with ARI underwent physical examination with nasal and throat swabs tested for influenza by rapid test. The rapid test results were shared with physicians who made treatment and management decisions. We analyzed predictors of oseltamivir use using Cox proportional hazards models.

Results: A total of 2,377 ARIs occurred in 784 children out of the 1,149 enrolled. Two hundred and twenty-nine (10%) ARIs were treated with oseltamivir, of which 147 (64%) were rapid test positive. Of those meeting treatment criteria, 10% were treated, whereas 10% of those not meeting treatment criteria were treated (p-value 0.84). Treatment was initiated within two days of illness onset in 133 (58%) episodes, and a 5-day course of treatment was completed in 212 (93%) episodes. Of all ARIs, 175 (7%) required hospitalization and 950 (40%) occurred in chronically ill children; 60 (34%) and 102 (11%) were treated with oseltamivir, respectively. Children were significantly more likely to receive oseltamivir if they were <2 years of age [adjusted hazard ratio (aHR) 2.4, 95% confidence interval (95% CI) 1.7-3.3], hospitalized (aHR 5.4, 95% CI 3.5-8.6), chronically ill (aHR 1.3, 95% CI 1.0-1.8), rapid test positive (aHR 24.7, 95% CI 17.2-35.7), or had high tympanic temperature (aHR 1.2, 95% CI 1.0-1.3).

Conclusions: Although overall use of oseltamivir was low, physicians were more likely to prescribe oseltamivir to severely ill children and those with high fever. Continued education among physicians should stress prompt empirical treatment with oseltamivir to maximize the benefits of treatment.

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