

Oseltamivir Effect on Antibiotic-Treated Lower Respiratory Tract Complications in Virologically Positive Randomized Trial Participants

TO THE EDITOR—In a meta-analysis of randomized controlled trials, we found that oseltamivir reduced the risk of antibiotic-treated lower respiratory tract complications by 28% (95% confidence interval [CI], 11%–42%) in outpatients and by 37% (95% CI, 18%–52%) in outpatients with laboratory-confirmed influenza infections [1]. This intent-to-treat-infected (ITTI) group included study participants who were confirmed to have influenza infection either serologically (≥ 4 -fold or greater rise in hemagglutination-inhibition antibody titer in convalescent sera) or virologically (virus isolation from respiratory samples collected at enrollment). A recent Cochrane review [2] noted that the ITTI group included subjects defined by a posttreatment variable (serology) that might have been influenced by oseltamivir administration, and hence an analysis restricted to the ITTI group might have provided a biased estimate of effectiveness. Because the virus-positive subgroup is the one in which a biological effect would be expected, we have reanalyzed the data from the same trials, restricting consideration to individuals who were culture positive for influenza at the time of enrollment. These data were obtained from Roche for the same trials in our original meta-analysis [1].

Forty-seven percent (1031/2188) of subjects in the oseltamivir arms and 42% (719/1720) of those in the placebo arms had a positive culture at enrollment. Of the 1750 subjects with a positive culture, 4.8% (49/1031) of oseltamivir and 8.3% (60/719) of placebo recipients had an antibiotic-treated lower respiratory tract complication. The pooled reduction in the risk of such a complication for oseltamivir vs placebo was 33% (95% CI, 3%–54%) using a fixed-effect model as in the

original meta-analysis, and 30% (95% CI, -17% to 58%) using a random-effects model. These estimates are similar to those previously reported for the ITTI group, although the 95% confidence intervals are wider.

Notes

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