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| Title | Oseltamivir for the Treatment of Suspected Influenza: A Clinical and Economic Assessment |
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Aim

- To assess and quantify the effectiveness of treating suspected influenza with oseltamivir
- To assess the cost effectiveness of treating suspected influenza with oseltamivir in a primary care setting.

Conclusions and results

Clinical Effectiveness: Six trials, all sponsored by the industry and all of generally high quality, met the inclusion criteria. Of the 1735 participants, 469 were at risk of developing complications. Oseltamivir treatment resulted in an absolute reduction for a combined outcome of death, hospitalization, and complications of 1% (95%CI: -2% to 3%) and 2% (95%CI: -5% to 8%) in otherwise healthy individuals and at-risk individuals, respectively, who were suspected of having influenza. Analysis of these three outcomes separately indicated similarly small and statistically insignificant results. Overall, the data suggest that the benefits of oseltamivir are limited to treating otherwise healthy individuals suspected of having influenza, and that its effects are, at best, palliative.

Economic Analysis: Results in terms of cost per quality-adjusted life-year showed that treatment with oseltamivir is unlikely to be cost effective for the healthy population, based on reasonable assumptions about diagnostic accuracy in primary care when influenza is circulating in the community. For oseltamivir to be even marginally cost effective from a government payer perspective, very favorable assumptions are needed: high diagnostic accuracy, few late presenters treated inappropriately, and optimistic assumptions about clinical effectiveness. Although clinical evidence is inconclusive, the analysis suggests that oseltamivir is also unlikely to be cost effective for treating adults at risk of developing influenza-related complications.

Methods

Reviewers selected relevant studies from a systematic review of randomized controlled trials obtained by searching electronic databases, contacting experts in the field and the drug manufacturer, and conducting bibliographic searches and hand searches of reviews and conference abstracts. The quality of these studies was assessed, and the data were independently extracted and combined, if appropriate, by meta-analysis. For the economic evaluation, a decision analytic model was used to compare the health outcomes, resource use, and costs associated with treating suspected influenza with oseltamivir to using symptomatic relief medication only. Two populations were assessed from the perspective of a government payer in Canada: healthy persons aged 18 to 65 years, and those at risk of developing influenza-related complications. Both cost-effectiveness and cost-utility analyses were performed.

Further research/reviews required

Further trials comparing oseltamivir with placebo, as well as the other antiviral medications, are needed to adequately assess outcomes, especially in the at-risk population.