Clarithromycin Leads to Long-Term Survival and Cost Benefit in Ventilator-Associated Pneumonia and Sepsis

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ABSTRACT

Increasing numbers of admissions for sepsis impose a heavy burden on health care systems worldwide, while novel therapies have proven both expensive and ineffective.

We explored the long-term mortality and hospitalization costs after adjunctive therapy with intravenous clarithromycin in ventilator-associated pneumonia (VAP). Two hundred patients with sepsis and VAP were enrolled in a published randomized clinical trial; 100 were allocated to blind treatment with a placebo and another 100 to clarithromycin at 1 g daily for three consecutive days. Long-term mortality was recorded. The hospitalization cost was calculated by direct quantitation of imaging tests, medical interventions, laboratory tests, nonantibiotic drugs and antibiotics, intravenous fluids, and parenteral and enteral nutrition. Quantities were priced by the respective prices defined by the Greek government in 2002. The primary endpoint was 90-day mortality; cumulative hospitalization cost was the secondary endpoint.

All-cause mortality rates on day 90 were 60% in the placebo arm and 43% in the clarithromycin arm (*P* = 0.023); 141 patients were alive on day 28, and mortality rates between days 29 and 90 were 44.4% and 17.4%, respectively (*P* = 0.001). The mean cumulative costs on day 25 in the placebo group and in the clarithromycin group were €14,701.10 and €13,100.50 per patient staying alive, respectively (*P* = 0.048). Respective values on day 45 were €26,249.50 and €19,303.10 per patient staying alive (*P* = 0.011); this was associated with the savings from drugs other than antimicrobials.

It is concluded that intravenous clarithromycin for three consecutive days as an adjunctive treatment in VAP and sepsis offers long-term survival benefit along with a considerable reduction in the hospitalization cost.

(This study has been registered at ClinicalTrials.gov under registration no. NCT00297674.)