View Correction

Article

Recombinant Human Interleukin 1 Receptor Antagonist in the Treatment of Patients With Sepsis Syndrome

Results From a Randomized, Double-blind, Placebo-Controlled Trial

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Abstract

Objective. —To further define the safety and efficacy of recombinant human interleukin 1 receptor antagonist (rhIL-1ra) in the treatment of sepsis syndrome.

Study Design. —Randomized, double-blind, placebo-controlled, multicenter, multinational clinical trial.

Population. —A total of 893 patients with sepsis syndrome received an intravenous loading dose of rhIL-1ra, 100 mg, or placebo followed by a continuous 72-hour intravenous infusion of rhIL-1ra (1.0 or 2.0 mg/kg per hour) or placebo.

Outcome Measure. —Twenty-eight—day all-cause mortality.

Results. —There was not a significant increase in survival time for rhIL-1ra treatment compared with placebo among all patients who received the study medication (n=893; generalized Wilcoxon statistic, *P*=.22) or among patients with shock at study entry (n=713; generalized Wilcoxon statistic, *P*=.23), the two primary efficacy analyses specified a priori for this trial. Results from secondary analyses suggest an increase in survival time with rhIL-1ra treatment among patients with dysfunction of one or more organs (n=563; linear dose-response, *P*=.009)

with both dysfunction of one or more organs and a predicted risk of mortality of 24% or greater (n=411; linear dose-response, *P*=.002).

Conclusions. —There was not a statistically significant increase in survivial time for rhIL-1ra treatment compared with placebo among all patients who received the study medication or among patients with shock at study entry. Secondary and retrospective analyses of efficacy suggest that treatment with rhIL-1ra results in a dose-related increase in survival time among patients with sepsis who have organ dysfunction and/or a predicted risk of mortality of 24% or greater.(*JAMA*. 1994;271:1836-1843)