

CORRESPONDENCE

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In Reply:—We thank Drs. Donati and Plaud for pointing out the error in figure 2 in our published study.¹ Unfortunately, this calculation error not only escaped our attention, but also the attention of the reviewers. However, this error does not change our conclusions. The isobolographic analysis still demonstrates a synergistic interaction with respect to the neuromuscular blocking activity of the rocuronium and cisatracurium combination (fig. 1). The experimentally determined ED₅₀ (and 95% confidence interval) for the combination was 36.8 (35–38) μg/kg for rocuronium and 8.7 (8.3–9.1) μg/kg for cisatracurium. The theoretic additive ED₅₀ (and 95% confidence interval) was calculated to be 55.5 (53.3–57.7) μg/kg for rocuronium and 13.1 (12.6–13.6) μg/kg for cisatracurium. The confidence intervals of these points do not overlap, and the results of a Student *t* test for potency ratio were significant ($P < 0.001$), indicating synergism. The fractional (algebraic) analysis of this interaction still demonstrates synergism (table 1).

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Reference

1. Naguib M, Samarkandi AH, Ammar A, Elfaqih SR, Al-Zahrani S, Turkistani A: Comparative clinical pharmacology of rocuronium, cisatracurium, and their combination. *ANESTHESIOLOGY* 1998; 89:1116–24

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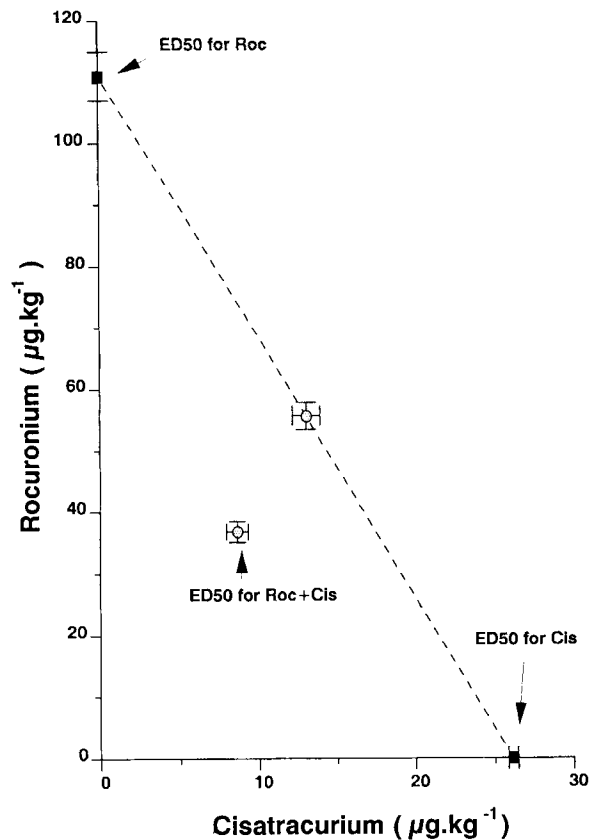


Fig. 1. First-twitch ED₅₀ isobologram for the interaction of rocuronium and cisatracurium. The dashed line connecting the single-drug ED₅₀ points is the theoretical additive line, and the point on this line is the theoretical additive ED₅₀ point (95% confidence interval). The experimentally determined ED₅₀ dose (95% confidence interval) of the rocuronium–cisatracurium combination decreased significantly ($P < 0.001$) below the corresponding theoretical additive point, indicating synergistic interaction.

Table 1. ED₅₀ Values and 95% CI for Rocuronium and Cisatracurium Administered Alone and in Combination in a Fixed-dose Ratio

Group	Rocuronium Component		Cisatracurium Component		Sum of ED ₅₀ Fractions
	Fraction of ED ₅₀	Dose (μg/kg)	Fraction of ED ₅₀	Dose (μg/kg)	
Rocuronium	1.00	111 (107–115)	—	—	1.00
Cisatracurium	—	—	1.00	26.2 (25.8–26.5)	1.00
Combination	0.33	36.8 (35–38)	0.33	8.7 (8.3–9.1)	0.66