

Use Actual Body Weight for Sugammadex Dosing in Obese Patients

Dosing of sugammadex based on actual body weight is both rapid and effective for reversal of rocuronium-induced paralysis in morbidly obese patients.

Sugammadex reverses rocuronium-induced paralysis and is widely used in Europe and Australia. Recommended dosage is based on actual body weight (ABW) rather than ideal body weight (IBW). To compare dosing strategies, researchers in Belgium randomized 100 morbidly obese patients (body-mass index, $>40 \text{ kg/m}^2$) undergoing elective bariatric surgery to one of four sugammadex dosing groups: IBW, IBW + 20%, IBW + 40%, or ABW. All patients received general anesthesia and 0.6 mg/kg of rocuronium for paralysis and then 2 mg/kg of sugammadex when partial neuromuscular recovery was noted.

Baseline patient characteristics (age, sex, body weight, fat mass) were similar among groups. Reversal times (time from injection of sugammadex to train of 4 ratio >0.9) were similar in the IBW + 40% and ABW groups (113 and 129 seconds) and significantly faster than in the IBW and IBW + 20% groups (189 and 155 seconds). Extubation times (time from sugammadex injection to extubation) were similar among groups. Approximately half the patients in each group transferred to beds independently in the postanesthetic care unit, and no patients complained of muscle weakness.

Comment: Drug dosing for obese patients can be challenging. Although the sugammadex reversal times differed, extubation times did not differ among groups. This study's findings demonstrate that sugammadex dosing based on ABW is as rapid and effective as dosing based on IBW. ABW dosing is easier to calculate, and, in the absence of studies showing any benefit of lower-dosing regimens, it should be used to determine sugammadex dosing.

— [Cheryl Lynn Horton, MD, and Ron M. Walls, MD, FRCPC, FAAEM](#)

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