Reviewer's report

**Title:** Sugammadex is Effective in Reversing Rocuronium in the Presence of Antibiotics

**Version:** 1  
**Date:** 27 December 2013

**Reviewer:** Michele Carron

**Reviewer's report:**

**Major Compulsory Revisions:**

1. Sugammadex 4 mg/kg was not given according to the level of the neuromuscular blockade (NMB) observed 15 min after the last dose of rocuronium. Profound NMB should be evaluated recurring to the post-tetanic count (PTC) stimulation. Sugammadex 4 mg/kg allows a quick and safe reversal of profound NMB (1-2 PTCs at acceleromyography monitoring), but may result in slow recovery in presence of a deeper NMB (absence of PTCs) (Groudine SB, Anesth Analg 2007). Generally, the correct dosing regimen for sugammadex should be able to accelerate the speed of recovery to a TOF ratio #0.9 in #3 min (Groudine SB, Anesth Analg 2007; Sorgenfrei IF, Anesthesiology 2006; Schaller SJ, Core Evid. 2013). In this study, a wide range of the recovery times was observed in antibiotics group (0.7–10.5 min) and no antibiotics group (0.7–22.3 min), with 15% and 19.7% of patients, respectively, needing more than 3 min to recovery to TOF ratio #0.9. Are these delays related to sugammadex, antibiotics or both? Please comment.

2. The Authors should better exclude any influences of antibiotics in delayed recovery from NMB after sugammadex administration. According to table 3, eight patients (12.5%) in antibiotic group showed a delay (>3 min) in reversal from NMB. It could be interesting to know the right level of NMB before sugammadex administration in these patients, particularly in the case in which recovery took 10.5 min (Al Ahdal O, Can J Anesth 1995), which antibiotics (and relative doses) were administered (Al Ahdal O, Can J Anesth 1995; Hasfurther DL, Can J Anesth 1996), and compare the data with those cases (sixteen patients, see table 3) of delay (>3 min) observed in no antibiotics group.

**Discretionary Revisions**

1. The Authors should explain the selection of the cohort of patients (197). In the multicenter observational study trial 224 patients were involved (White PF, Anesth Analg 2009).

2. The Authors should comment hematuria. It's a very unusual AE possibly related to sugammadex. Any influences of gender, surgery or urinary catheterization?

**Minor Essential Revisions:**

1. Abstract (results) and main text (conclusions): please insert 4 mg/kg after
sugammadex.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

This reviewer has received payments for lectures from Merck Sharp & Dohme (MSD), Italy.