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Letter to Editor

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Reversal with Sugammadex in the Absence of Neuromuscular Monitoring

Ki Hwa Lee*

Department of Anesthesiology and Pain medicine, Haeundae Paik Hospital, InjeUniversity, 875, Haeundae-ro, Haeundae-gu, Busan, Korea

***Corresponding author**: Ki Hwa Lee, Department of Anesthesiology and Pain medicine, Haeundae Paik Hospital, InjeUniversity, 875, Haeundae-ro, Haeundae-gu, Busan, Korea, Tel: +82-51-797-0421; E-mail: tedy3333@naver.com

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Sugammadex provides rapid and reliable recovery of neuromuscular (NM) function from rocuronium or vecuronium-induced NMblockade than neostigmine. The dose of sugammadex, ranges from 2 to 16 mg/kg, is adequately matched with the degree of NM blockade [1]. But, routine clinical care does not normally involve the use of an NMmonitoring device to guide the administration of NM blocking drugs or their antagonists in Korea and many countries [2].

Will there be a difference between the reversal of neostigmine and sugammadex when NMmonitoring is not? Will sugammadexreduces the incidence of post-operative residual weakness compared with neostigmine when the administration of rocuronium and its antagonists is not guided by NM monitoring? Kotake et al. [2] demonstrated that sugammadex in the absence of NM monitoring failed to eliminate the occurrence of post-operative residual weakness. They found high number of patients who had post-operative residual weakness after reversal with either neostigmine or sugammadex. The risk of TOF ratio<0.9 after tracheal extubation after sugammadexremains as high as 9.4% in a clinical setting in which NM monitoring was not used. This study reported that the short interval between the last dose of rocuronium and sugammadex administration was found to be associated with an increased risk of residual weakness after sugammadex.

Also, the overall prevalence of residual neuromuscular blockade(RNMB) at arrival in the post-anesthetic care unit (PACU) was 10.8%, independent of reversal agent used [3]. Patients who received sugammadex presented with higher TOF ratio at the PACU, although no difference in RNMB was detected compared to neostigmine. The use of intermediate-acting muscle relaxants decreased the frequency of RNMB and postoperative respiratory complications. The incidence of residual block was significantly higher in the pancuronium group than in the atracurium/vecuronium group [4].

In another authors reported that the use of sugammadexat the end of surgery wasshown to eliminate RNMB at PACU admission while, in contrast, 43% of patients treated with neostigmine [5]. TheTOF ratio at PACU entry was significantly higher in the sugammadex group, compared with neostigmine (1.07 ±0.09 vs 0.90 ± 0.17, respectively; P<0.0001). The different point between two researches was administered dose of sugammadex [2, 5]. 2.7 ±1.0 mg/kg [2] and 4.00 mg/kg (2.93-4.19 mg/kg) [5] of sugammadex were intravenously administered to the patients, respectively.Adequate dose of reversal agent, sugammadex is essential.

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