

INTISARI

Latar belakang: Hadirnya alat pemantauan TOF dan sugammadex belum mampu mengeliminasi kejadian paralisis residual. Ketersediaannya pun belum terjangkau di sebagian praktik klinis. Neostigmin, agen reversal selama puluhan tahun, dapat dioptimalisasi pemberiannya, sehingga dapat meningkatkan probabilitas keberhasilan upaya reversal. Strategi ini menggunakan prinsip ketepatan dosis berdasarkan derajat blokade dan ketepatan waktu ekstubasi sejak reversal.

Metode: Sebuah uji klinis terandomisasi dengan ketersemaran pada pengamat melibatkan 72 subyek usia 18-60 tahun yang akan menjalani pembedahan elektif di bawah anestesia umum intubasi menggunakan sevofluran dan rocuronium. Subyek dibagi dua kelompok perlakuan paralel secara acak stratifikasi berdasarkan jenis pembedahan untuk melihat angka kejadian paralisis residual di ruang pemulihan. Perlakuan pada kelompok A berupa strategi klinis reversal neostigmin optimal tanpa pemantauan TOF, sedangkan kelompok B berupa strategi reversal neostigmin berdasarkan pemantauan kuantitatif TOF.

Hasil: Enam (16,7%) kejadian paralisis residual di ruang pemulihan terjadi di kelompok A, sedangkan satu kasus (2,8%) di kelompok B ($p=0,107$; 95%CI 0,01;0,27). Tidak ada subyek dengan nilai rasio TOF di ruang pemulihan $<0,70$. Nilai rasio TOF di ruang pemulihan tidak berbeda antara kedua kelompok ($p=0,053$; 95%CI -5,20;0,29). Namun, waktu reversal-ekstubasi kelompok A lebih lama dibandingkan kelompok B. Perbedaan absolut proporsi kejadian paralisis residual di ruang pemulihan tersebut adalah 13,9% (95%CI 6%;27,2%). Uji ekuivalensi menunjukkan bahwa nilai 95% *confidence interval* penelitian ini sebagian berada di luar dari kisaran margin ekuivalensi (15%). Satu kejadian buruk respiratorik didapatkan di ruang pemulihan.

Kesimpulan: Strategi klinis reversal optimal tanpa pemantauan TOF tidak ekuivalen terhadap strategi klinis reversal berdasarkan pemantauan kuantitatif TOF.

Kata kunci: Neostigmin, Paralisis residual, Pemantauan kuantitatif TOF, Reversal, Rocuronium

ABSTRACT

Background: *The presence of TOF monitoring tools and sugammadex have not been eliminated residual paralysis events. In addition, its availability has not been available in some clinical practice. Neostigmine is a reversal agent that has been used for decades. Its administration can be optimized, so as to increase the probability of successful reversal efforts. This strategy uses the principle of precise dose based on the degree of blockade and the timing of extubation since reversal.*

Methods: *A observers-blinded-randomized-clinical trial involved 72 patients aged 18-60 years undergoing elective surgery under general anesthesia using sevoflurane and rocuronium with intubation. Stratified randomization based on the type of surgery divided the subjects into two parallel groups of intervention to identify the incidence of residual paralysis in the recovery room. The intervention in group A was an optimal neostigmine reversal clinical strategy without TOF monitoring, whereas group B was a neostigmine reversal strategy based on TOF quantitative monitoring.*

Results: *Six (16.7%) residual paralysis in the recovery room occurred in group A, while one case (2.8%) occurred in group B ($p=0.107$; 95%CI 0.01; 0.27). No subjects had TOF ratio <0.70 in the recovery room. The TOF ratio in the recovery room did not differ between the two groups ($p=0.053$; 95%CI -5.20; 0.29). However, the reversal-extubation time in group A was longer than in group B. The absolute difference in the proportion of residual paralysis in the recovery room was 13.9% (95%CI 6%; 27.2%). The equivalence test showed that the 95% confidence interval of this study is partly outside the range of equivalence margin (15%). One respiratory adverse event in the recovery room was found in this study.*

Conclusion: *An optimal reversal clinical strategy without TOF monitoring is not equivalent to a reversal clinical strategy based on TOF quantitative monitoring.*

Keywords: *Neostigmine, Residual Paralysis, Quantitative Monitoring TOF, Reversal, Rocuronium*