

Safe use of rocuronium for a post-polio syndrome patient

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To the Editor:

Patients with “post-polio syndrome” can experience recurrent muscle weakness years after acute poliovirus infection [1]. We report a case of a 64-year-old woman who was scheduled for mastectomy. We report the effect of rocuronium, as evaluated by train-of-four (TOF) monitoring of this patient. She had undergone two caesarean sections, under spinal anesthesia with prolongation of hypesthesia and under general anesthesia with delayed awakening, which was speculated to be caused by residual neuromuscular blockade (NMB). She presented with muscle weakness in the lower extremities and the right upper extremity (manual muscle testing 3/5), but spirometry values were normal. After induction of general anesthesia, neuromuscular monitoring was started by use of TOF monitoring of the right adductor pollicis muscle. The TOF ratio was 100 %. Rocuronium (0.6 mg/kg) was used for NMB. Anesthesia was maintained with sevoflurane and remifentanyl. The change of TOF ratio is shown in the figure. Because TOF monitoring showed the ratio was 100 % at the end of surgery, NMB was not reversed. She did not report any respiratory complaints.

Patients with post-polio syndrome are known to be potentially hypersensitive to NMBs, anesthetic agents, and opioids [1]. Because they have fewer motor neurons than normal [1], shorter acting non-depolarizing NMBs are desirable and neuromuscular monitoring is necessary. In our case, it seems likely she did not experience prolongation of the rocuronium effect. Moreover, we did not observe any signs of hypersensitivity to sevoflurane or remifentanyl. Prolongation of the effects of these drugs is likely to depend on the extent of paralysis. Recurarization after spontaneous complete recovery does not occur with non-depolarizing NMBs. Although we did not reverse the rocuronium, it might be better to administer sugammadex.

Conflict of interest None.

Reference

1. Lambert DA, Giannouli E, Schmidt BJ. Postpolio syndrome and anesthesia. *Anesthesiology*. 2005;103:638–44.

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