Anesthesia protocol:

The patients were visited one day before the operation, and preoperative anesthesia assessments were performed. As routine premedication, all patients were administered oral midazolam 0.5 mg/kg after eight hours of fasting.

Demographical data, such as age, height and weight, were recorded after the patients had been transferred to the operating room, and ECG, blood pressure and pulse oximeter monitoring procedures were performed before the induction of anesthesia. Peripheral venous access was established with a 22G or 24G catheter, and systolic arterial pressure (SAP), diastolic arterial pressure (DAP), mean arterial pressure (MAP), heartbeat rate (HBR) and oxygen saturation (SaO2) values were recorded. TOF monitoring was performed to assess neuromuscular transmission.

As a hypnotic agent for induction, a sevoflurane 8% and N2O-O2 50% mixture was administered to the patients without venous access, and propofol 2-3 mg/kg was given to patients whose venous access had been established. Afterwards, a standard anesthesia induction and maintenance procedure was followed for all patients. Intubation was performed after administering fentanyl 1 µg/kg, lidocaine 1 mg/kg and rocuronium 0.6 mg/kg. A Sevoflurane 1.5–2.5% and N2O-O2 50% mixture was given for maintenance. Immediately after induction, all patients were given intravenous dexamethasone 0.1 mg/kg, paracetamol 15 mg/kg (i.v. infusion for 15 minutes) and ondansetron 0.1 mg/kg.

TOF monitoring was performed throughout the operation, and hemodynamic data were recorded. Systolic arterial pressure, DAP, MAP, HBR and SpO2 values were recorded before induction (baseline, T0), before reversal (T1), after reversal (T2), before extubation

(T3), after extubation (T4), at the 1st minute in the recovery room (T5), at the 5th minute in the recovery room (T6) and at the 10th minute in the recovery room (T7).

At the end of the operation, the inhalation agent was stopped, and when TOF reached 25%, Group 1 was given neostigmine 50 µg/kg and atropine 0.20 µg/kg, and Group 2 was given sugammadex 2 mg/kg. The time between TOF 25–90% (the time between reversal and extubation) and the time between reversal-eye opening were recorded. In addition, the duration of anesthesia, duration of operation, duration of stay in the recovery room, need for additional anesthetics and complications were recorded. PAED scoring and agitation scoring (AS) (Table 1) were evaluated when all patients were transferred to the recovery room. Patients with PAED scores of ≥10 and AS of ≥3 were considered to be agitated. Patients with elevated PAED and AS scores were administered fentanyl 1 µg/kg, and patients who had pain but low PAED and AS scores were administered tramadol 0.5 mg/kg as an additional analgesic agent. Patients who developed a laryngo-bronchospasm were given lidocaine 1 mg/kg and prednisolone 1 mg/kg together with 100% oxygen; patients who developed bradycardia were administered an additional dose of atropine 0.20 µg/kg.