ATRACURIUM IN PATIENTS WITH CHRONIC RENAL FAILURE

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Nine patients (four women; mean age 59.6 yr) with chronic renal failure (CRF) underwent prolonged urological surgery. Two of them were already being treated with haemodialysis, another two with peritoneal dialysis and the remaining five had serum creatinine concentrations between 2.2 and 12 mg%. Premedication (atropine 0.5 mg + diazepam 10 mg) was administered i.m. 45 min before surgery. Anaesthesia was induced (thiopentone 0.4 mg kg\(^{-1}\) + fentanyl 0.05 mg i.v.) and, 2 min after the administration of atracurium 0.6 mg kg\(^{-1}\) as a bolus, the trachea was intubated. Anaesthesia was maintained with a mixture of nitrous oxide and oxygen (2:1), droperidol and fentanyl. Controlled ventilation was adjusted to maintain normal blood-gas tensions and pH values. The electromyographic response of the adductor muscle of the thumb was recorded on a Life Tech electromyograph. Fifteen minutes after intubation, atracurium 0.006 mg kg\(^{-1}\) min\(^{-1}\) was administered in continuous infusion using a syringe pump. Arterial pressure, heart rate and ECG were continuously monitored. At the end of surgery, the infusion of atracurium was stopped and the muscular activity was evaluated, after 5 and 10 min. Whenever the muscular response was absent or reduced, prostigmine 1.5 mg + atropine 0.5 mg were administered.

None of the patients showed any adverse reaction at intubation and there were no changes in cardiovascular function. Total neuromuscular blockade was always achieved, as confirmed by clinical and instrumental evaluation. Five minutes after the end of surgery, 55.5% of the patients were conscious, although with insufficient muscular response. Ten minutes after the end of surgery, 75.5% of the patients were fully recovered from neuromuscular blockade and the remaining 24.5% had a complete response after administration of prostigmine + atropine.