the same degree of neuromuscular block that was obtained earlier without the inhalation of halothane.

In two other patients, who in every other respect were managed identically with those of the first halothane group, the influence of the admixture of 4% enflurane for 5 min and 1% enflurane for 10 min was determined.

Figure 1 indicates that the about 40% steady state neuromuscular block induced by the continuous infusion of Org NC 45 increased to about 60% after the addition of halothane.

The difference between the degree of neuromuscular block before and during the inhalation of halothane was significant at the 1% level. Similarly, figure 2 demonstrates that the i.v. dose of Org NC 45 required ($\mu g\ kg^{-1}\ h^{-1}$) to produce an about 90% steady state block was 25–30% less during the inhalation of halothane than before.

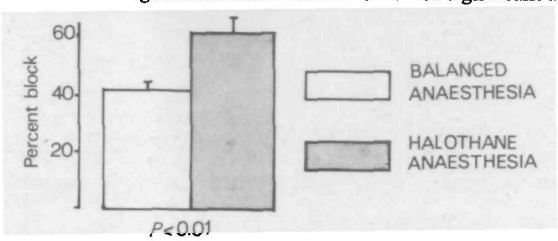

FIG. 1. The intensity of the steady state neuromuscular block induced by identical $\mu g\ kg^{-1}\ h^{-1}$ doses of Org NC 45 in the same patients under balanced or halothane anaesthesia.

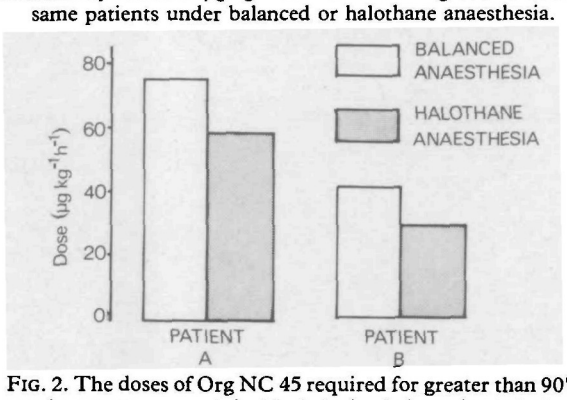

FIG. 2. The doses of Org NC 45 required for greater than 90% steady state neuromuscular block during balanced or halothane anaesthesia in the same two patients.

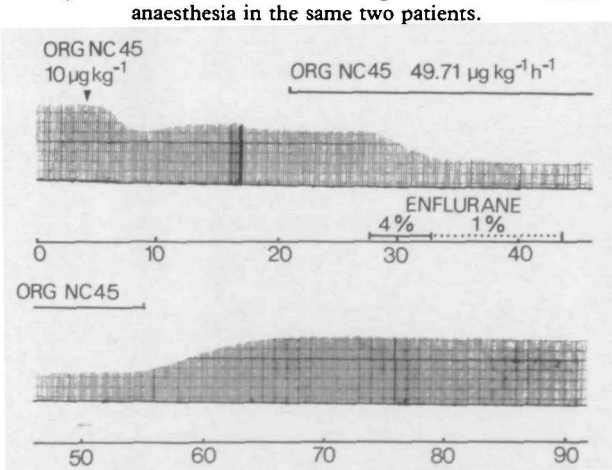

FIG. 3. The influence of enflurane on the intensity of the steady state neuromuscular block induced by Org NC 45 during balanced anaesthesia. Note that the about 30% block increased to about 70% during inhalation of enflurane.

As shown in figure 3, the about 30% steady state block produced by the continuous infusion of Org NC 45 49.71 $\mu g\ kg^{-1}\ h^{-1}$ increased to 75% during the inhalation of enflurane. A similar result was found in the other patient.

The potent inhalation anaesthetic agents, halothane and enflurane, potentiated the effects of Org NC 45 as they do other non-depolarizing neuromuscular blocking drugs. In about anaesthetic concentrations enflurane increased the neuromuscular efffects of Org NC 45 more than halothane. The findings presented suggest that in patients anaesthetized with halothane or enflurane, the doses of Org NC 45 should be about 25 and 45% smaller than those used with balanced anaesthesia.

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PRELIMINARY CLINICAL OBSERVATIONS WITH ORG NC 45

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We have used Org NC 45 in 40 patients. It was given in short surgical procedures and the time course of its action was assessed clinically. The routine monitoring of the patients included arterial pressure, heart rate and e.c.g. The anaesthetic technique was either an induction with thiopentone followed by enflurane in nitrous oxide and oxygen or flunitrazepam and fentanyl in nitrous oxide and oxygen. The patients were intubated 2.5 min after Org NC 45 0.07 mg kg^{-1} or 1.5 min after 0.1 mg kg^{-1}. The intubating conditions were satisfactory. In 20 cases the operating procedure lasted less than 25 min, so that the effect of one single dose could be observed. After Org NC 45 0.07 mg kg^{-1}, extubation was always possible 30 min after injecting Org NC 45. Spontaneous respiration was adequate and all patients were able to lift their head without needing neostigmine. Forty minutes after injection of Org NC 45 0.1 mg kg^{-1} spontaneous respiration was also considered clinically adequate, but the patients were unable to lift their head. This residual curarization was always antagonized easily by the adminstration of atropine 0.5 mg and neostigmine 1.0 mg.

No effects on arterial pressure and heart rate were observed which could be attributed to Org NC 45 and no allergic reactions occurred in this small series of patients.