

# Pharmacokinetics and pharmacodynamics of Org NC 45

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# 1987 Fiscal Year Final Research Report Summary

## Pharmacokinetics and pharmacodynamics of Org NC 45

Research Project

### Project/Area Number

60570716

### Research Category

Grant-in-Aid for General Scientific Research (C)

### Allocation Type

Single-year Grants

### Research Field

麻酔学

### Research Institution

Kanazawa university

### Principal Investigator

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### Project Period (FY)

1985 - 1987

### Keywords

muscle relaxant / 薬物動態学

### Research Abstract


Org NC 45, one of the non-depolarizing muscle relaxants, has shorter duration of action, and its metabolism is mainly depend on the liver. Pancuronium bromide (PB) is the most widely-used, but Org NC 45 is thought to take place of PB. Eighteen patients were anesthetized with 1% enflurane and 60% nitrous oxide in oxygen. Nine patients were given 0.05 mg/kg Org NC 45, and the other nine patients were given 0.2 mg/kg Org NC 45 as a bolus injection: The neuromuscular effect of Org NC 45 was monitored by measuring the twitch tension of adductor pollicis muscle. The plasma concentration of Org NC 45 was determined by high performance liquid chromatography. Small dose group had significantly smaller distribution half-life and larger peripheral volume, compared with large dose group. Central compartment was almost equivalent to circulating blood volume and steady state distribution volume was almost equivalent to interstitial fluid volume. We could not evaluate the relation between pharmacodynamic parameters in large dose group, because twitch tension was completely depressed even at 50 min after the administration. In small dose group, there was no correlation between the kinetic parameters of each patient and the time to 25%, 50% recovery of the single twitch tension.


## Research Products (4 results)


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All Other

All Publications (4 results)

[Publications] 野村俊之: 第33回日本麻酔学会総会号. 35. S31 (1986) 

[Publications] 野村俊之: Vecuronium bromide. 11 (1986) 

[Publications] Toshiyuki Nomura: "Pharmacokinetics and pharmacodynamics of Vecuronium bromide" The Japanese Journal of Anesthesiology. 35. S31 (1986) 

[Publications] Toshiyuki Nomura: Vecuronium bromide. Kokuseido, 11 (1986) 

**URL:** [https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-60570716/605707161987kenkyu\\_seika\\_hokoku\\_](https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-60570716/605707161987kenkyu_seika_hokoku_)

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