

Meeting abstract

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## Changes in the action of morphine challenge following perinatal morphine exposure in rats

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### Objective

In our previous experiments decreased adaptability in rats exposed to perinatal morphine (MO) was observed 2 days after weaning. The aim of the present study was to examine how chronic MO treatment of dams influences the maternal behaviour (MB) and the sensitivity toward MO in offspring.

### Methods

Pregnant Wistar rats were treated daily with MO (10 mg/kg s.c.) from the day of mating until weaning (post partum day [PD] 21). Spontaneous MB (active nursing, passive nursing, littering and behaviours out of the nest) was checked on the 2nd, 3rd, 5th, 7th and 9th PDs. Analgesic affect of MO was measured in tail-flick test in the offspring on PD 23. Conditioned place preference (CPP) inducing effect of MO was checked in adult offspring.

### Results

(1) Chronic MO treatment significantly impaired the MB.  
(2) Analgesic effect of MO was less marked, the CPP-inducing effect of MO, however, was more marked in offspring.

### Conclusion

Perinatal MO exposure alters the MO sensitivity in the offspring. The enhanced sensitivity to the reinforcing effect of MO in CPP, however, may be the consequence of altered maternal behaviour, too.

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