KETAMINE REVERSES THE HYPERALGESIA INDUCED BY REPEATED MORPHINE EXPOSURE IN EARLY LIFE

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Introduction: the recognition of the need to adequately assess and treat pain in neonates has lead to increased use of opioids in these patients. Objective: to evaluate whether morphine administration in early life alter the nociceptive response at P30. Material and Methods: were utilized 8-day-old male *Wistar* rats divided into 2 groups: saline (C) and morphine (M) (5 µg s.c., mid-scapular, once a day for 7 days). At P30 the groups were subdivided into 2 groups: ketamine and saline, which received 30 min before the formalin 30 mg/kg of ketamine (CK and MK) or saline i.p. (CS and MS) (n=10-12/group). The nociceptive responses were analyzed by the formalin test and the behaviors analyzed were the total time spent (s) in licking and flicking of the formalin-injected paw. It was recorded in 2 phases: phase I (5min) and phase II (15-30min). Data were analyzed by one-way ANOVA/Bonferroni and expressed as mean$\pm$SEM. Differences were considered significant if $P<0.05$. Results and Conclusion: the MK presented a decrease of nociceptive response in comparison to other groups, and CK presented a decrease response in comparison to CS in both phases, the MS presented equal response in phase I to CS, but increase response in phase II in comparison to other groups (phase I: CS=168.4$\pm$15, MS=178$\pm$12, one-way ANOVA, $P>0.05$; CK=63.8$\pm$3.8, MK=54$\pm$22; phase II: CS=452.1$\pm$41, CK=128.5$\pm$10, MS=639.9$\pm$38.6, MK=10.2$\pm$4.2, one-way ANOVA, $P<0.05$). The lower nociception threshold observed in the MS group could be due to changes in glutamatergic system, since it was reverted by NMDA antagonist receptor. Thus, this work demonstrates the importance of evaluating clinical consequences related to opioid administration in early life. Financial Support: CAPES, CNPq, FIPE/HCPA (08345), FAPERGS