

BEHAVIORAL EFFECTS OF EXPOSURE TO CHRONIC STRESS AND/OR HYPERCALORIC DIET ON OPEN FIELD TEST

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Introduction: It is known that levels of anxiety are related to eating disorders and that hypercaloric diets are widely used in modern habits. Objectives: evaluate the effect of exposure to chronic stress and/or hypercaloric diet on the behavior of rats in open field test. Methods: 96 male Wistar rats with 60 day-old (~250g), maintained under ideal biotery conditions with water and chow ad libitum. The animals were divided in 4 groups: control (C-standard chow/no stress), diet (Dhypercaloric diet/no stress), stress (S-standard chow/chronic stress) and diet/stress (DS-hypercaloric diet/chronic stress). Stress was applied 1h/day between 9am and 12pm, 5 days/week. After 80 days of treatments, the rats were submitted to open-field test. Results were expressed as mean±SEM and analyzed by two-way ANOVA/Bonferroni test for multiple comparisons. Differences were considered significant for $P<0.05$. Approved by ethics committee of GPPG-HCPA: 100382. Results: stress exposure increased the latency to leave the first quadrant ($S=14.96+1.72$, two-way ANOVA, $P<0.05$). There was significant effect of hypercaloric diet in outer crossings ($HD=86.04+3.98$, two-way ANOVA, $P<0.05$). In the inner crossings we observed an interaction between stress and diet ($SD= 3.80+0.65$, two-way ANOVA, $P<0.05$), associated to no effect of stress or of hypercaloric diet exposure. In the total crossings we observed significant effect of hypercaloric diet ($HD=89.54+4.16$, two-way ANOVA, $P<0.05$). Conclusion: Our results showed an increase on parameters indicatives of anxiety-like behavior. In addition, suggested that stress effect is altered by high calorie diet that it appears to minimize the effect of stress. Financial Support: Pos-Graduate Research Group (GPPG) at HCPA (Dr I.L.S.,Torres- Grant-10-0383); CNPq, CAPES.