

ADVERSE EFFECTS OF DELTAMETHRIN PESTICIDE IN OFFSPRING RATS EXPOSED IN UTERINE AND LACTATION PERIOD

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Deltamethrin, a synthetic piretroid insecticide, is amply used in the combat of plagues in cotton, coffee, soy, corn, rice, tobacco, fruit and vegetables, as well as for the combat of insects in animals and humans. Environmental Protection Agency (EPA) listed the deltamethrin as a chemical with potential to disrupt the endocrine function. The main purpose of the present study was to investigate the possible adverse effects of commercial deltamethrin (Decis 25CE()) in pregnant rats and their offsprings. Wistar female rats were treated orally with 0, 1 or 3 mg of deltamethrin/kg (control, D1 and D3 groups) 21 days prior mating, during mating, pregnancy and lactation (segment I for reproductive study). The doses were stipulated considering the reproductive chronic NOAEL dose (no observed adverse effect level). The following parameters were investigated: dam weights during the treatment period, embryonic death, litter size, birth and weaning weight and sexual development of the offspring. The results showed that these doses did not induce signal of maternal toxicity. The embryonic death and litter size were unaffected. The body weights (g) of the offspring rats treated with deltamethrin were affected adversely at birth and at weaning on postnatal day 21 (birth weight: control: $6,07 \pm 0,93$; D1: $5,25 \pm 0,11^{**}$; D3: $5,49 \pm 0,66^{**}$ and weaning weight: control: $35,4 \pm 7,77$; D1: $33,3 \pm 5,09$; D3: $32,7 \pm 6,24^*$). The day of preputial separation was delayed in both treated groups, but only in the highest dose of deltamethrin this delayed was statistically significant (control: $29,7 \pm 1,58$; D1: $31,0 \pm 2,17$; D3: $32,4 \pm 2,50^{**}$). The results of this study show that low doses of commercial deltamethrin that no induce signs of maternal toxicity can interfere with body and sexual development when immature organs are exposed during the perinatal period. * = $p < 0,05$ (ANOVA), ** = $p < 0,01$ (ANOVA).

Key Words: Deltamethrin; endocrine disrupters; chronic toxicity; Wistar rats.