

ABSTRACT

The purpose of this research were identified the development of mice embryo (*Mus musculus*) (the number of fetus, the number of fetus resorption, the weight of fetus, the length of fetus, the percentage of skeletal abnormality, the number of fetus Purkinje cells, and the reproduction capacity of female mice) after being given herbicide 2,4 dichlorophenoxyacetic acid (2,4D).

There were 90 experimentals pregnant mice (*Mus musculus*) used in this study. This research were divided into three groups of research. The first research was observed the number of fetus, the number of fetus resorption, the weight of fetus, the length of fetus, and the percentage of skeletal abnormality. The second research was counted the number of fetus Purkinje cells. The third research was knew the reproduction capacity of female mice offspring, that is the percentage of pregnancy and the number of fetus produced by the female mice offspring.

The result of this study shows that the administration of herbicide 2,4 D in the pregnancy period of 8 – 16th days if compared with the period of 8 – 13th days and the combination between time duration and dosage of administration did not reduced the number of fetus, the weight and length of fetus, and the percentage of skeletal abnormality ($p > 0.05$). The time duration of administration and the combination of time duration and dosage of administration have decreased the number of fetus Purkinje cells ($p < 0.05$). Raising the dosage from 2,4D to 40 % LD₅₀ decreases the number of fetus, the weight of fetus, the number of pregnancy, and the number of fetus of female mice offspring, and may increases the number of resorption. The raise of dosage until 40 % LD₅₀ does not increases the percentage of skeletal abnormality.

Key words : *Mus musculus*, 2,4 dichlorophenoxyacetic acid, embryo development.