

عنوان مقاله:

Teratogenic Effects of Phenytoin in NMRI Mouse Fetuses

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خلاصه مقاله:

Background and Objective: One of the most important complications of utilization of anti-epilepsy drugs in pregnancy is an increase of fetal abnormality. There is not enough information about the role of phenytoin on teratogenic effects on pregnancy and on fetal organogenesis. Hence, this study was designed to determine the macroscopic abnormalities created by continuous use of phenytoin during organogenesis of fetus. **Materials and Methods:** Forty pregnant mice (NMRI type) were divided into three experimental groups (I, II, III) and one control group. Three experimental groups I, II, III received 60 mg/kg, 75 mg/kg, and 90 mg/kg per day with 0.2 ml volume from the day 6.5 (GD6/5) to day 14.5 (GD14/5) of pregnancy intraperitoneally (i.p.). The control group received the same volume of normal saline instead. The mice on the day 18.5 of pregnancy were sacrificed, and their tail lengths, weights, and abnormalities were studied. Data were analyzed by ANOVA and Tukey tests. **Results:** In the experimental groups, the mean weight and tail length was reduced significantly compared to the control group ($P < 0.05$). In all three experimental group (I, II, III) abnormalities such as absorption of same fetal, hemorrhage in different organs and follicular thyroid was increased significantly compared to the control group ($P < 0.05$). **Conclusion:** Our results show that utilization of the drug phenytoin in mouse during organogenesis not only induces absorption of some fetuses, weight loss, and tail length reduction, but it can also induce abnormalities such as hemorrhage and follicular thyroid

کلمات کلیدی:

Keywords: Phenytoin, Teratogenicity, Fetal, Mouse

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