

مطالعه اثرات سیکلوسپورین گالنا بر جنین موش نژاد balb/c در طی زمانهای حساس حاملگی

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Teratogenic Effects of Galena Cyclosporine on balb/c Mouse Embryo during Critical Period of Pregnancy

Abstract

Introduction: Fathernity and fertility is a tremendous desire of male and female patients with end stage renal disease (ESRD) after succesfully renal transplantation. Investigations have been shown that one out of fifty female patients, which underwent successful renal transplant, became pregnant. As some drugs are harmful and may have teratogenic effect, In this study the teratogenic effects of new cyclosporine (Galena) on pregnant mouse was investigated.

Methods and Material: In this experimental study 14 pregnant balb/c mice divided into three groups. Experimental group I with 5 pregnant mice received 20 mg/kg cyclosporin on days 7, 8, 9, 10 of gestation. Experimental group II with 5 pregnant mice received 30 mg/kg on the same days, and control group with 4 mice received the same volume of physiologic serum at the same time. On day 18th of gestation all pregnant mice were sacrificed by cervical dislocation and their fetuses were examined under microscope for congenital malformation. The weight and length of fetuses were also investigated.

Results: Our data revealed that there was no anomaly in the fetuses in both groups, but the median weight of fetuses were lower in experimental groups than control group (1.4 gr in group I versus 1.05 gr in group II and 1.6 gr in control group) ($p < 0/05$). In addition the median length of the fetuses was also lower in experimental groups in comparison with control group (2.3 cm in group I & II versus 2.4 cm in control group). Most placentas in experimental groups showed infarcted area on maternal site.

Conclusion: These data indicated that although Galena cyclosporine has no teratogenic effect on mouse balb/c fetus, consumption of cyclosporine during pregnancy results in intrauterine growth retardation.

Keywords: Cyclosporine, Fetus, Teratogenic, Balb/c mouse, Renal transplant

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