Current Issue
Browse Issues
Search
About this Journal
Instruction to Authors
Online Submission
Subscription
Contact Us
RSS Feed

Acta Medica Iranica
2009;47(4) : 44-47

The study of teratogenic effect of Cyclosporine in vitro

Ostad SN, Abdollahi M, Sabzevari O, Daghiani F

Abstract:

The use of immunosuppressive medication such as Azathioprine, methoterxate and mercaptopurine in treatment of rheumatic disease in women at childbearing age has some risks of teratogeniesis. Cyclosporine is one of the newer medicines, which has been introduced for this disease but little is known about its teratogenicity. This study was designed to investigate the possible teratogenicity of this drug by using cultured rat limb bud cells, which were obtained from rat embryos 13 days after conception. Cells were incubated in trypsin-EDTA solution for 30 min at 37°C and then filtered through 50 µm nylon filters. The resultant cell suspension was cultivated in 1 ml Dulbecco modified Eagle medium (DMEM) containing 10% fetal bovine serum and 445 µg/L L-glutamine at 37°C with 5% CO2. After 8 days of culture the differentiated foci extract were measured by staining with 1% alcian blue. To assess the teratogenic effects of cyclosporine, it was placed in the culture well together with the cells. Results showed that the decrease in the expression of the extracellular matrix at dose of 0.01 molar of cyclosporine is due to limb bud cell toxicity rather than inhibition of cell differentiation.

Keywords:

Rat limb bud ، Micromass culture

TUMS ID: 1284

Full Text HTML Full Text PDF 887 KB

top