

## Protection against Sodium Arsenate Induced Fetal Toxicity in Albino Mice by Vitamin C and E

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**Abstract :** Epidemiological evidences indicated that arsenic contamination in drinking water increased the incidence of spontaneous abortion, stillbirth and premature babies in pregnant women. This study was designed to investigate the protective role of vitamin C&E against sodium arsenate induced fetal toxicity in albino mice. Twenty-four pregnant albino mice of BALB/c strain were randomly divided into 4 groups having 6 animals in each. Group A1 served as control and was injected with 0.1ml/kg/day distilled water I/P for 18 days. Groups A2,A3 & A4 received single I/P injection of sodium arsenate 35mg/kg on 8th gestational day, whereas groups A3 and A4 were also given Vitamin C and E by I/P injection, 9 mg/kg/day and 15 mg/kg/day respectively, starting from 8th GD and continued for the rest of the pregnancy period. The early implantation sites, fetal resorptions, weight of live fetuses and crown rump length were recorded. Gross morphological examination was carried out for malformations. Fetal kidneys were extracted for histological and micrometric analysis. Group A2 exhibited an increased incidence of abortion, fetal resorptions, significant decrease in number of litter and fetal weight; the difference of means was statistically significant among the groups ( $p<0.000$ ). In group A2 fetal kidneys presented glomerulonephritis with acute tubular necrotic changes and interstitial fibrosis. Groups A3&A4 showed statistically significant improvement in these parameters. The results revealed the antioxidant potential of Vitamin C and E in protecting against arsenic induced fetal toxicity in mice.

**Keywords :** fetal toxicity, fetal resorptions, interstitial fibrosis, tocopherol

**Conference Title :** ICMMA 2014 : International Conference on Microscopic and Macroscopic Anatomy

**Conference Location :** Barcelona, Spain

**Conference Dates :** August 18-19, 2014