
P67. GENOTOXIC AND ANTIGENOTOXIC EFFECTS OF CYNARIN AGAINST MITOMYCIN-C INDUCED SISTER CHROMATID EXCHANGES

Esra ERIKEL, Deniz YÜZBAŞIOĞLU, Fatma ÜNAL

Gazi University, Science Faculty, Department of Biology, Genetic Toxicology Laboratory, 06500, Ankara, TURKEY

Artichoke is a plant that is cultivated for its head and leaves which can be eaten as a vegetable. Numerous studies on artichokes have showed that it has health-protective effect such as hepatoprotective, antioxidant, hypocholesterolemic and anticarcinogenic activities. Cynarin is a polyphenol that is derivative of di-caffeoylquinic acids in artichoke. It has strong antioxidant activity. The present study was planned for the assessment of potential in vitro genotoxic and antigenotoxic effect of cynarin against mitomycin-C (MMC) by using sister chromatid exchange (SCE) assay in human lymphocytes. Peripheral lymphocytes were incubated with different concentrations of cynarin (6.25, 12.50, 25.00, 50.00, 100.00 µg/mL) alone and simultaneously with 0.2 µg/mL MMC for 24 and 48 hours. A negative, a solvent (50% methanol) and a positive control (MMC) were also maintained. Cynarin did not significantly increased the SCE/cell frequency at all the concentrations alone compared to control groups at both 24 h and 48 h (except 100 µg/mL). Simultaneous treatment of Cynarin and MMC significantly reduced the frequency of SCEs/cell in the three concentrations (12.50, 25.00 and 50.00 µg/mL) compared to positive control in both application times. Our results suggested that cynarin may have antigenotoxic potential especially at highest concentrations.

* esraerikel@gmail.com