

Ataxia telangiectasia: effects of cycloheximide on G2 repair of chromosome damage in lymphocytes cultured in vitro Ataxia telangiectasia: efectos de cicloheximida en la reparacion del daño cromosomico durante G2 en linfocitos cultivados in vitro.

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The chromosomal sensitivity to the spontaneous and induced DNA damage detected in lymphocytes from patients affected with ataxia telangiectasia (AT) might be related with disturbances in DNA repair mechanisms. We have studied the effect of caffeine, an inhibitor of G2 repair and the enlargement of G2 by 0.5 ug/ml cycloheximide on chromosomal aberration frequencies in AT lymphocytes, both in control and X-ray irradiated conditions. The increase of spontaneous and X-ray induced chromosomal aberrations by caffeine treatments during G2 in AT lymphocytes was higher than in control cells. The number of spontaneous and X-ray induced lesions repaired during G2 in AT cells was higher than in normal cells. The enlargement of G2 duration by 0.5 ug/ml cycloheximide decreased the spontaneous and X-ray induced chromosomal aberrations in AT cells, whereas no such effect was observed in control cells. We postulate that disturbances in the mechanism that control G2 duration might be involved in the hig