DHEA pode ser útil no tratamento do câncer de mama: diminui a proliferação (parada do ciclo em G1), diminui a migração e aumenta a apoptose

Effects of dehydroepiandrosterone on proliferation, migration, and death of breast cancer cells.


Source
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Abstract
Cancer invasion and metastasis are the leading causes of mortality in patients with breast cancer. Dehydroepiandrosterone (DHEA) has a protective role against cancer, however, the mechanism by which DHEA has this effect remains poorly understood. The present study was aimed at investigating the actions of DHEA on the proliferation, cell cycle, death and migration of breast cancer cell lines. We used MCF-7 cells (estrogen receptors positive) and MDA-MB-231 and Hs578T cells (estrogen receptors negative) for these studies. Cell proliferation was evaluated by crystal violet staining, cell cycle by flow cytometry, and cell death by the carboxyfluorescein FLICA analysis of caspase activation. Migration was evaluated by transwell cell migration and wound assay. We also determined the expression of ECM-1 protein by western blotting and RT-PCR in real time. DHEA inhibited the proliferation of all breast cancer cell lines. This was associated with an arrest in the G1 phase of the cell cycle and death in MCF-7 cells. There was no alteration in any of the cell cycle phases or death in DHEA treated MDA-MB-231 or Hs578T cells. DHEA also suppressed the migration of all breast cancer cell lines, independently of the presence of estrogen receptors and decreased the expression of ECM-1 protein in Hs578T cells. These results suggest that the mechanism of DHEA actions against breast cancer involves the inhibition of cell proliferation and the suppression of migration, indicating that DHEA could be useful in the treatment of breast cancer.

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