

Synergistic Effect of Combined Treatment with Extra Virgin Olive Oil and Doxorubicin on squamous cell carcinoma cell line

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Abstract

Background: In spite of the fact that the medical care has been extremely improved, the survival rate of patients diagnosed with Squamous cell carcinoma is still decreased . Doxorubicin (DXR) is one of the most effective anti- squamous cell carcinoma drugs. This drug has a dangerous side effects. Natural products can lighten the DXR- induced side effects, without compromising its antitumor efficacy. The consumption of extra virgin olive oil (EVOO), appeared to be related to fewer malignant tumor occurrences. Aim of the study: The objective of the present study was to evaluate the effect of EVOO when used alone and, more interestingly, when combined with DXR, for 48 hours, on lingual squamous cell carcinoma cell line (SCC25). Materials and methods: SCC25 was used in this study, it was divided into four groups. Group I (control), group II (DXR treated), group III (EVOO treated) and group IV (EVOO+DXR treated). Results: there was significant decrease in MMP-1, VEGFR-2 expressions as well as migration and invasion between the test groups and the control group. Conclusion: EVOO is a promising anticancer compound when used alone or in combination with DXR.

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