ω-6 AND ω-3 FATTY-ACIDS ON EARLY STAGES OF MICE SUBMANDIBULAR GLANDS TUMOR

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The aim of this work was:to assess the impact of diets enriched in polyunsaturated fatty acids ω-3 and ω-6 families on the lipid profile of cell membrane and their effect on cycle regulation and apoptosis, evaluated by TP53 and Ki-67 expression in 9,10-dimethyl-1,2-benzanthracene (DMBA) induced tumor development in submandibular glands (SMG) in murine models. To generate tumorigenic changes, SMG mice in the experimental group were injected with 50µl of 0.5% of DMBA. Both control (no DMBA) and experimental groups of BALB/c mice were fed with: chia oil (ChO), rich in ω-3 fatty acid; corn oil (CO), rich in ω-6/ω-3 fatty acid; and safflower (SO) oil, rich in ω-6fatty acid. Results demonstrate novel differential effects of ω-3 and ω-6 PUFAs on the regulation of early tumorigenesis events in murine SMG injected with DMBA. This knowledge may help to develop chemoprotective treatments, therapeutic agents and health promotion and prevention activities in humans.