Indol 3 carbinol inhibits nasopharyngeal carcinoma.

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Source

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Abstract

This study explored the effects of indole-3-carbinol on the proliferation of human nasopharyngeal carcinoma, both in vitro and in vivo, and the underlying mechanisms in inducing apoptosis of CNE1 cells. Proliferation, apoptosis, malondialdehyde, superoxide dismutase, glutathione peroxidase, expressions of caspase-9, and caspase-3 in human nasopharyngeal carcinoma cells CNE1 were examined. Indole-3-carbinol suppressed proliferation, induced apoptosis, decreased malondialdehyde level, increased the activity of superoxide dismutase and glutathione peroxidase, and up-regulated the expression of active fragments of caspase-9 and caspase-3 both in vitro and in vivo. It was concluded that indole-3-carbinol could inhibit proliferation and induce apoptosis of CNE1 cells and inhibit tumor growth in mice. Increased activity of superoxide dismutase and glutathione peroxidase and activated expression of caspase-9 and caspase-3 were also observed in indole-3-carbinol-treated tumors or tumor cells, suggesting that stress- and apoptosis-related molecules are involved in the indole-3-carbinol-induced apoptosis and inhibition of tumor growth.

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