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Curcumin Inhibits Proliferation and Metastasis of Human Hypopharyngeal Carcinoma Cells

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SUMMARY. **The present study was designed to investigate the effects of curcumin, a natural product derived from turmeric of the herb *Curcuma longa,* on proliferation, metastasis of FaDu cells, and the relevant mechanisms. Results showed that curcumin could inhibit the proliferation, induce apoptosis of FaDu cells, and arrest the cell-cycle at S phases in a dose-dependent manner. The ability of FaDu cells in migration and invasion was declined significantly after treated with curcumin. Additionally, caspase-9 and caspase-3 were activated, and the expression of Bax and E-cadherin were up-regulated, whereas, the expressions of Bcl-2, MMP-2 and MMP-9 were down-regulated in response to curcumin. In conclusion, these data suggested that curcumin can effectively suppress proliferation and inhibit the invasion and metastasis of FaDu cells via the induction of apoptosis, the blockage of cell cycle as well as the modulation of certain relevant genes.**

KEY WORDS: Hypopharyngeal carcinoma, Curcumin, Proliferation, Apoptosis, Metastasis.

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