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Synergic effect of curcumin and melatonin on proliferation and apoptosis of HT29 colorectal cancer cell line.

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Background and Aims: Curcumin is a herbal poly phenol extract from curcuma longa and exhibited potent inhibitory effect in some malignancies, In particular, many reports have demonstrated that curcumin induces apoptosis in human cancer cell lines, such as HL-60, K562, MCF-7,HeLa and HT29. also melatonin is a natural substance which is produced in human body and its' potent antiproliferative and apoptotic effect in some kind of cancers especially gastrointestinal neoplasia has been determined , in our study we assayed the synergical effect of curcumin with melatonin in colorectal cancer in vitro HT29 cell line model.
Methods: For proliferative study we used MTT assay and for apoptosis study we used TUNEL in situ fluorescence apoptotic assay.
Results: our study showed that antiproliferative and apoptotic effect of curcumin increased with melatonin significantly.
Conclusions: we can suggest this pharmaceutical regime for those people with familial or environmental risk of colon cancer.

Keywords: Colorectal cancer; Apoptosis; Proliferation; Curcumin, Melatonin