Cigarette Smoke Induces Colorectal Carcinogenesis in Wistar Rats by Decreasing The Expression of APC, MSH2 and MLH1

Title	Cigarette Smoke Induces Colorectal Carcinogenesis in Wistar Rats by Decreasing The Expression of APC, MSH2 and MLH1
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Abstract	Colorectal carcinogenesis induced by cigarette smoke requires at least 30-40 years. This long time duration causes an animal research conducted becomes relevant. This research was carried out to observe colorectal carcinogenesis due to cigarette smoke exposure in Wistar Rat. The observations focused on changes in epithelial morphology and expression of APC, MSH2 and MLH1. Twenty male Wistar rats inbreed strain were randomly allocated into control group and experimental group exposure to cigarettes smoke for 14 weeks and 28 weeks sequentially. Colorectal epithelial morphology was assessed on the histopathology examination, whereas the expression of APC, MSH2 and MLH1 was assessed on aspect of immunohistochemistry. The comparative analysis between the two groups was performed using non-parametric Mann-Whitney U test. Histology of colorectal epithelium showed pattern of colitis associated cancer that was significant both in 14 weeks and 28 weeks of treatment. This research indicated negative expression of APC, MSH2 and MLH1 in the colorectal cancer that were significant at 28 weeks of exposure. This research implies that chronic exposure to cigarette smoke can induce colitis associated colorectal cancer through decreased expression of APC, MSH2 and MLH1.
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