

마늘 에탄올추출물이 대장 암화 과정에 미치는 영향

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Preventive Effects of Ethanol Extracts from Garlic on Colon Carcinogenesis

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실험목적

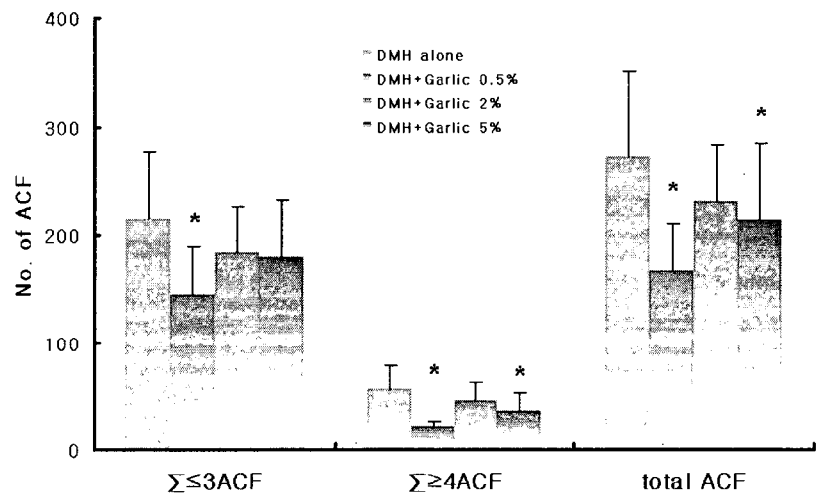
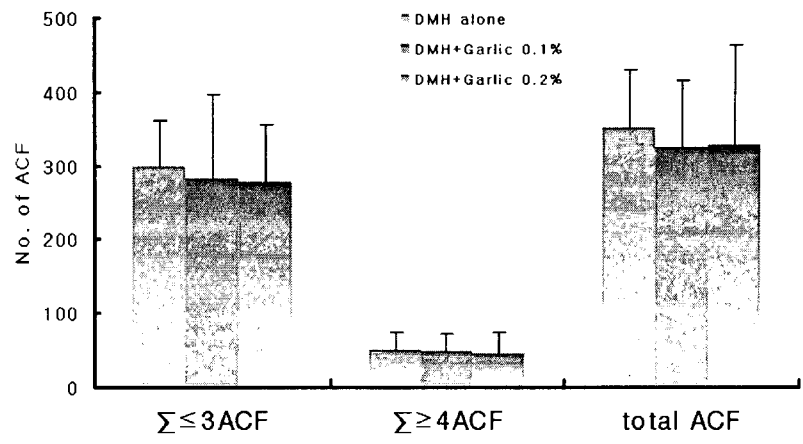
Garlic (*Allium sativum*) has been used of various countries in Asia and Europe as food supplement and medicine from of old. Epidemiological studies made a suggestion the intake of garlic with a reduced incidence of various digestive cancer. The present study was designed to investigate the effect of garlic ethanol extracts on the development of colonic aberrant crypt foci(ACF) induced by 1,2-dimethylhydrazine(DMH) in male F344 rats.

재료 및 방법

Five-weeks old animals were given four times for two weeks subcutaneous injections of DMH(30mg/kg body weight) to induce ACF. The animals were divided into groups that fed diet containing garlic ethanol extracts at five different doses (0.1, 0.2, 0.5, 2, 5%), respectively animals were evaluated for the number of ACF and total aberrant crypts(AC) per colon detected from methylene blue-stained rat colon. ACF were formed in animals in DMH-treated group. The feeding suppressed potentially the appearance ACF in the colon of rats.

결과 및 고찰

Especially, fed diet containing garlic ethanol extract at intermediated dose (0.5%) significantly reduced the number of ACF and AC per colon ($p < 0.05$). These results suggested that garlic ethanol extracts may inhibit ACF formation, as the early preneoplastic marker of malignant potential in the process of colon carcinogenesis.



Effect of Garlic ethanol extracts on colonic ACF formation in male F344 rats
 *: Significantly different from DMH alone ($p < 0.05$) by ANOVA