

Antitumor Effect of Fucoidan-Mix Food

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【Objective】 Health maintenance effects of foods, particularly prevention of cancers, have been attracting high social attention in recent years. We have been focusing on the functions of an algal sulfated polysaccharide, fucoidan. In this study, we investigated the preventive effect of fucoidan-mix food on cancer.

【Methods】 Sarcoma 180 ($2 \times 10^5/0.2\text{ml}$) was subcutaneously transplanted in 5-week-old BALB/c mice, and the mice were fed fucoidan-mix food for 20 days. After completion of the feeding experiment, tumors formed under the skin were obtained and weighed. In addition, the cytotoxicity of the splenic NK cell was measured using YAC-1 as the target. As for clinical application in humans, the food was administered to patients with cancer, and the preventive effect was evaluated.

【Results and discussion】 When cancer-transplanted mice ingested the fucoidan-mix food, the tumor weight was significantly decreased compared to that in the control mice, and the splenic NK cell activity was high, suggesting that increased NK cell activity suppressed the cancer cell proliferation.

When the food was ingested to the patients with cancers, healing effects such as decreased cancer tissues and tumor markers were observed.