P1-15

Hypoglycemic and Antioxidant Effect of Dietary Extracted from Sea-Tangle on Streptozotocin-Induced Diabetic Rats

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Male Sprague-Dawley rats were blocked into four groups which were normal rats fed control diet (C), diebetic rats fed control diet (CD), normal rats fed extract sea-tangle diet (E), and diabetic rats fed the extracted sea-tangle diet (ED), Diabetes was induced by single injection of streptozotocin (60 mg/kg B.W, i.p.). The rats were fed ad libitum for 5 weeks. Malondialdemyde (MDA), glucose 6-Phosphtase (G6pase), glutathione S-transferase (GST), glutathioe peroxidase (GPX), and glutathione reductase (GR) activities were measured to the homogenates of liver and kidney, and total lipid. Food and water intake were markedly higher in diabetic groups than thoae normal groups. But FER (feed efficiency ratio) of ED group was higher than thatof C group. Also, urine was higher in CD and ED groups than those of others($p<0.05$) Levels of amylase, calcium, uric acid and hemoglobin were not significant in all groups. And the weekly change of blood sugar was not decreased in the 5th weeks. Levels of total lipid of E and ED groups were higher than those of C and CD groups. Levels of total lipid of ED group was higherthan those of CD group. Hepatic city G6Pase activity were significantly higher in CD and ED groups than Cand E groups. GST activity was decreased by extracted sea-tangle supplementation in diabetic rats (CD and ED groups) than those of others. In conclusion, extracted sea-tangle supplementation was increased serum total lipid in STZ-induced diabetic rat, but MDA levels of ED group was lower than those of others. Antioxidant effects of dietary extracted sea-tangle was appeared in Streptozotocin-induced diabetic rats.

P1-16

Oral Supplementation of Ginger (*Zingiber offinale* Roscoe) Water Extract and Splenocyte Proliferation in Mice

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Ginger (*Zingiber offinale* Roscoe)has long been used for food source in this country. We previously reported that in vitro experiment Ginger (*Zingiber offinale* Roscoe) showed the immune regulatory function in mice. The present study was focused on the immunomodulative effects of Ginger (*Zingiber offinale* Roscoe) water extracts in vivo experiment. Seven to eight weeks old mice (balb/c) were fed ad libitum on chow diet and water extract of Ginger (*Zingiber offinale* Roscoe) were orally administrated every other day for two weeks at two different concentrations (50 and 500 mg/kg b.w.). After preparing the single cell suspension, the proliferation of splenocyte was determined by MTT (3-[4, 5-dimethylthiazol-2-yl]-2,5-diphenyl terazolium bromide) assay. After 48 hrs of incubation with the mitogen (Con A or LPS) stimulation, the mouse splenocyte proliferation was increased at the level of 141% and 4% higher than that of control group in 50, at the level of 152% and 134% higher than that of control group in 500 mg/kg b.w group with Con A and LPS stimulation respectively. Conclusively , our study suggested that the water extract of Ginger (*Zingiber offinale* Roscoe) may regulate the immune function by enhancing the splenocyte proliferation capacity in mice, and the cytokine production capacity by activated macrophages is under investigation.