

Nucleic Acid Metabolism of Small Intestine and Liver Induced by Hyperbaric Oxygenation Therapy for Superior Mesenteric Arterial Occlusion

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Although the direct vascular surgery has been the treatment of choice for superior mesenteric arterial occlusion (SMAO), the prognosis remains still very gloomy. Then, the authors have studied on the effectiveness of oxygen at height pressure (OHP) as one of the treatment for SMAO in rats and the results were obtained as follows: 1) Post-occlusion survival could be obtained in groups of SMAO of less than 2 hours in rats. 2) OHP 2 atmospheres absolute (2ATA) for one hour preformed immediately after release of occlusion could improve the survival-rate even in rats with SMAO for 3 and 4 hours, but OHP (3ATA) was not so effective in the similar groups. 3) ^{32}P -uptake into RNA in small intestinal wall or liver was increased in group treated with OHP (2ATA) compared with in OHP (3ATA) and Air (1ATA) groups at the time-points of 6 and 12 hours after administration of ^{32}P . The similar results were obtained in both groups with SMAO

for 1 and 3 hours. But no difference was found in ^{32}P -uptake into DNA of small intestinal wall among groups of AIR (1ATA), OHP (2ATA) and OHP (3ATA). 4) ^{32}P -uptake into DNA of liver showed the similar tendency as ^{32}P -uptake into RNA of small intestinal wall and liver. 5) Higher level of ^{32}P -uptake into small intestinal mucous membrane was found in any group compared with ^{32}P -uptake of small intestinal wall. 6) Among the various kinds of solution infusing into the peritoneal cavity in this experiment, physiological saline group showed much lower ^{32}P -uptake into small intestinal wall or liver nucleic acid than 5% glucose, 5% fructose, or 5% xylitol group. It might be summarized so far that OHP (2ATA) evaluates as one of the treatment for SMAO under the consideration of reducing the pathological change, accentuating the metabolic rate of the damaged intestine, and following by the improved survival rate.

Analysis of Cell Proliferation of Induced Squamous Cell Carcinoma of Skin in Mice and the Effects of Bleomycin on Cancer Cell Proliferation

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By painting 3, 4- Benzpyrene solubilized in sesame oil on the skin of mouse (d-d strain), squamous cell carcinoma was induced. Pro-

liferation of this cancer cell was investigated and the effects of Bleomycin on cancer cell proliferation was studied for the purpose of