Thesis Title	Effect of Fructose-1,6-Diphosphate on Lipid Metabolism in Surgical Patients on Total Parenteral Nutrition
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ABSTRACT

The effect of fructose-1,6-diphosphate (FDP) on lipid metabolism was assessed in 23 surgical patients with carcinoma of the gastrointestinal tract on total parenteral nutrition (TPN). Their mean(±SEM) age was 62.82±1.28 years. They were divided into 2 groups according to the administration of FDP. Group I and II consisted of 12 and 11 patients. The study period covered for 10 postoperativedays. On the operative day (D0), both groups had the energy intake ranged from 400-600 kcal derived from glucose only. At D1, they received 1,850 kcal derived from 75 g of amino acids, 61 g of fat, and 250 g of glucose. During D2-10 they received a daily supply of 2,850 kcal derived from 75 g amino acids, 61 g of fat and 500 g of glucose. Only group II during D4-10

received peripheral vein infusion of 15 g of FDP (ESAFOSFINA)/day. Before the operation, both groups were in the state of linoleate depletion coexisting with protein-calorie malnutrition. The benefit of fat administration postoperative TPN was evidenced by the increases in their serum and erythrocyte 18:2 n-6 levels. After receiving fat emulsion, there were no significant changes in their serum lipid and plasma lipoprotein levels. The results suggest the beneficial effect of FDP administration on serum and erythrocyte linoleate, serum glucose and albumin levels. The safety of FDP administration is supported by no striking differences in various hematological and biochemical parameters between groups I and II at the end of the study.