Abstract No.45

Effect of ω-3 Fatty Acids Supplementation on Nutritional Status in Patients With Gastric Cancer During Chemotherapy

Ali Nemati [1], Reza Mahdavi [2], Iraj Faizi-Khankandi [3], Mojtaba Amani [4], Elnaz Faramarzi [2]*

1. Lecture in Nutrition department of Basic Scinces School of Medicine, Ardabil University of Medical Sciences, Ardabil, IR
2. School of Health and Nutrition, Tabriz University of Medical Sciences, Tabriz, IR
3. Department of General and Thoracic Surgery, Ardabil University of Medical Sciences, Ardabil, IR
4. Department of Basic Sciences, Ardabil University of Medical Sciences, Ardabil, IR
(E-mail: mahdavir@tbzmed.ac.ir)

Although the results of some studies indicated positive effects of ω-3 supplementation on nutritional status of cancer patients who undergo different cancer treatments, there is not consistent findings .Therefore, we examined the effects of ω-3 fatty acid on nutritional status of patients with gastric cancer undergoing chemotherapy.In this clinical trial 15 volunteer gastric cancer patients (stage II ,III) received 3 gram ω-3 fatty acid for 45 days during chemotherapy. Before and after supplementation, height and body weight were measured and body mass index calculated . Dietary intake of patients were assessed using 24 hour recall questionnaire (3 days) .Serum albumin of patients were determined by kits at the onset and the end of intervention .Data were analyzed by paired t-test.ω-3 supplementation resulted in significant increase in daily mean energy (1651.2 ± 183.4 vs 1792.7 ± 130.4 kcal/d), protein (73.16 ± 22.13 vs 74.5 ± 13.84 gr/d) intakes and the mean body weight (56.7 ± 10.2 vs 59.2 ± 8.9 kg) ($p<0.05$). At the end of intervention , the mean serum albumin also increased (3.8 ± 0.22 vs 4.2 ± 0.34 gr/dl) significantly ($p<0.05$).The result of this study indicated that supplementation of ω-3 fatty acid may have positive effects on body weight, and nutritional status in patients with gastric cancer during chemotherapy.

Keywords: Omega 3, Weight, Nutrition, Gastric Cancer.

Abstract No.46

Molecular Cloning, Overexpression and Biochemical Characterization of Pyrazinamidase from M. Tuberculosis

Mehrnoosh Safarzadeh [1], Faramarz Mehrnejad [1], Mohammad Pazhang [1], Davood Rabiei [1], Farahnoush Doustdar [2], Nader Chaparzadeh [1], Mohammad Hosseini [1]*

1. Department of Cellular and Molecular Biology, Faculty of Science, Azarbaijan University of Tarbiat Moallem, Tabriz, IR
2. Department of Microbiology, Faculty of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, IR
(E-mail: safarzade.ma@yahoo.com)

The Nicotinamidase/Pyrazinamidase (PncA) of Mycobacterium tuberculosis plays a key role in the activation of the important front-line antituberculosis drug pyrazinamide by converting it into the active form, pyrazinoic acid. Mutations in pncA , the PZAse coding gene , is considered to be the major mechanism of PZA resistance in M. tuberculosis. However the effects of pncA mutations on structure and function of pyrazinamidase is unknown.In this study, the wild type PZAse and mutated PZAses from M. tuberculosis PZA-resistant strains were cloned and expressed. The activity was assayed by a modification of the Wayne Test and recombinant pyrazinamidases were tested for their kinetic parameters (activity, k_{cat}, K_m, and efficiency) and in order to understand how PncA mutations affect the enzymatic function the mutated PZAse structure was determined by homology modelling.These results suggest that the enzymatic activity and efficiency of the mutated pyrazinamidases varied according to the localization of the mutation and based on the color intensity the strains classified having positive, weak, or negative Wayne activity.

Keywords: Tuberculosis, Pyrazinamidase, Pyrazynamide, Enzymatic Kinetics, Resistance.

Abstract No.47

Investigation on the Side Effects of New Designed Anti Cancer Compound of 1,10-Phenanthroline Butyl Dithiocarbamato Palladium(II) Nitrate

Shirin Khodabakhshian [1], Adeleh Divsalar [1], Ali Akbar Saboury [2], Hassan Mansouri-Torshizi [3]*

1. Department of Biological Sciences Tarbiat Moallem University, Tehran, IR
2. Institute of Biochemistry and Biophysics Tehran University of Medical sciences, Tehran, IR
3. Department of Chemistry University of Sistan and Bluchestan, IR
(E-mail: khodabakhshian2010@yahoo.com)

Human serum albumin (HSA) is the most prominent protein in plasma. This protein is responsible for about 80% of the colloid osmotic