

Serum total protein, albumin and albumin/globulin biomarkers in patients with active pulmonary tuberculosis

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Abstract

Pulmonary Tuberculosis (PTB) is an old disease in the history of mankind. Pakistan is ranked 4th among 22 countries with high prevalence of TB in the world. PTB and malnutrition have a strong co-relation. Dietetic scarcity may possibly manipulate the anticipation of the tuberculosis regimen and also managing the TB. The objective of this study was to assess the serum total protein, albumin, globulin and albumin/globulin ratio in patients with active pulmonary TB in order to regulate the health management of the malnourished patients. A total of 248 patients of both gender within similar age group (20 to > 60 years) were selected from Institute of Chest Diseases, TB Sanatorium Hospital, Kotri, Sindh, Pakistan; Liaquat University of Medical & Health Sciences, Jamshoro, Sindh, Pakistan; Institute of Chest Disease, Liaquat University Hospital Hyderabad, Sindh, Pakistan; and Rajputana Hospital, Sindh, Pakistan. In our study, we observed that the serum total protein, albumin, albumin/globulin ratio decreased while serum globulin levels were increased significantly in active pulmonary tuberculosis patients compared to healthy normal control subjects. The mean serum total protein, albumin, globulin and albumin/globulin ratio were 7.1 ± 1.1 g/dl, 3.7 ± 0.8 g/dl, 3.4 ± 1.4 g/dl and 1.1 ± 0.5 g/dl and was analyzed by Microlab 300 using kit method. In conclusion, the malnutrition may fade the efficacy of the anti-mycobacterial treatment against the syndrome. Accordingly, there is a necessity of healthy diet along with pharmaceutical rehabilitation to restore the health and overcome the disease burden.

Biography

Zainab Manzoor Memon is a PhD Research Scholar in Biochemistry. Currently, she is working at Liaquat University of Medical & Health Sciences, Jamshoro, Pakistan. She has eight international research publications and has presented her research work at national and international conferences. She has attended many academic workshops, symposia and has three years of research experience. She has expertise on bio-analytical techniques such as AAS, spectrophotometer, AAA, ultra-centrifuge machine, HPLC, Microlab 300 & Chemistry Analyzer. She also has command on statistical software including SPSS and Minitab.

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