EVALUATION OF TRACE ELEMENTS, BIOCHEMICAL AND HEMATOLOGICAL DATA FROM AN ELDERLY GROUP OF SÃO PAULO CITY, SP, BRAZIL

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The aging population has gone through a rapid increase throughout the world and investigations on health status of elderly individuals are becoming of great interest especially in regard to healthy longevity. Many laboratories tests have also been used to evaluate health conditions of this population. In this study, blood serum trace elements, biochemical and hematological parameters were obtained so as to assess the state of health of an elderly population residing in São Paulo city, SP, Brazil. Blood samples were collected from the elderly (22 males and 59 females) aged from 60 to 90 years from the "Successful Ageing" Program of the São Paulo Medical School (FMUSP). Serum Ca, Fe, Rb, Se and Zn concentrations were obtained by neutron activation analysis at the IPEN-CNEN/SP. Serum Cu, K, Mg, Na and P, as well as, biochemical and hematological parameters were determined using routine analysis methods of the Central Laboratory Division, HC-FMUSP. Results obtained showed that more than 95% of the studied individuals presented Cu, K, Fe, Mg, P, Rb, Se and Zn concentrations within the reference ranges. In terms of hematological parameters, more than 91% of the population presented values within reference intervals. As to the biochemical parameters, more than 95 % presented normal ranges for glucose, protein and albumin levels; 68 % showed desired total cholesterol concentrations of < 200 mg dL^{-1} and, 81% of the group showed normal triglyceride concentrations. The study highlighted the considerable variation in the serum trace element concentrations however most of results are within reference ranges. An important finding of this study was that 32% presented elevated total cholesterol concentrations but 93% showed desired high-density lipoprotein cholesterol and 59 % of desired low-density lipoprotein concentrations. These results suggest the study of the relationship between trace elements and biochemical parameters.