Objective: To evaluate the relationship between serum albumin, total cholesterol and total lymphocyte count with two nutritional assessment methods, to verify if their use is justified in nutritional screening tools. Methods: 101 patients admitted to medical/surgical wards underwent the SGA and the Full Nutritional Assessment (FNA). Blood test which included serum albumin, total cholesterol and total lymphocyte count (TLC), were made. Percentage of weight loss and BMI were calculated. An Anova test was done to measure the differences in the mean levels of the three parameters for the nutritional status evaluated by SGA and FNA. The probability of a patient being malnourished in the four ranges established for each parameter was calculated, as well as the relationship between the ranges and the percentage of weight loss and BMI. Sensitivity and specificity were calculated and the corresponding ROC curves, using SGA as gold standard. Results: Prevalence of undernutrition is 43.6% and 44.6% for SGA and FNA respectively. Mean levels of the three parameters decrease as the undernutrition degree increases (p < 0.005 for all cases). The probability of a patient being malnourished gets higher as parameter lowers (p = 0.000 for all cases). Total cholesterol shows a relationship with BMI 18.5 and presence/absence of weight loss (p = 0.074 and p = 0.002 respectively). The area under ROC curves are albumin (0.823), cholesterol (0.790) and TLC (0.758) respectively. Conclusions: The analytical parameters analyzed show a statistically significant relationship with the nutritional status. Therefore, they are suitable for use in nutritional screening.

Keywords

Undernutrition, Malnutrition, Nutritional screening, Serum albumin, Total cholesterol, Total lymphocyte count.