

Correlation between hyperlipemia and erythrocytes indexes

Sadeghian, M.H., Ayatollahi, H., Azarian, H., Najibzade, M., Farzam, H., Khajehim, E.

Mashhad University of Medical Sciences, Faculty of Medicine, Hematology and Blood Banking Department, Mashhad, Iran

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Abstract

There are few reports that show hyperlipidemia can be cause of erroneous results in the automated cell counters with spurious increased or decreased red blood cell indexes. In this study, we investigated whether increased serum triglyceride or cholesterol concentration can alter red blood cell indices or not. Laboratory results of 100 outpatient, which included complete blood cell count (erythrocyte indexes), cholesterol, triglyceride and fasting blood sugar, were collected. Results of diabetic and anemic patients omitted due to their possible influence on erythrocyte indexes. Laboratory results were analyzed by nonparametric Spearman's method. Serum triglyceride level had a positive correlation with MCHC along with cholesterol level. However, there was no correlation with MCV and MCH. Furthermore we did not find any correlation between cholesterol and erythrocyte indexes. This study showed that hypertriglyceridemia significantly increased MCHC. We did not detect any correlation between hypercholesterolemia and erythrocytes indices.

Author keywords

Cholesterol; Erythrocyte indexes; Triglyceride

Indexed Keywords

EMTREE drug terms: cholesterol; glucose; hemoglobin; triacylglycerol

EMTREE medical terms: adult; aged; anemia; article; cholesterol blood level; controlled study; correlation coefficient; diabetic patient; erythrocyte count; female; glucose blood level; human; hyperlipidemia; hypertriglyceridemia; laboratory test; major clinical study; male; mean corpuscular hemoglobin; mean corpuscular volume; nonparametric test; outpatient; triacylglycerol blood level

Chemicals and CAS Registry Numbers: cholesterol, 57-88-0; glucose, 50-99-7, 84778-74-3; hemoglobin, 9008-02-0

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