

Serum Selenium Level Negatively Correlated With Monocytes Chemoattractant Protein-1 in Healty Subjects

Mutakin^{1*}, Holis A.Holik¹, Rizky Abdullah², Hiroshi Koyama³

1. Department of Pharmaceutical Analysis and Medicinal Chemistry, Faculty of Pharmacy, Universitas Padjadjaran, Jl. Bandung Sumedang KM21 Jatinangor, Indonesia
2. Department of Pharmacology and Clinical Pharmacy, Faculty of Pharmacy, Universitas Padjadjaran, Jl. Bandung Sumedang KM21 Jatinangor, Indonesia
3. Department of Public Health, Gunma University Graduate School of Medicines, 3-9-22 Showa Machi, Maebashi, Gunma Prefecture, Japan

Abstract

Objectives. Selenium is reported to be associated with the development of the diseases such as cancer and cardiovascular disease. Metabolic syndrome is a risk factor of coronary heart disease. This paper investigates the association between the predictor of metabolic syndrome and plasma selenium concentration.

Methodology. To examine the association between metabolic syndrome and plasma selenium concentration, seventy eight plasma samples of the subject with high risk for metabolic syndrome were analyzed for their metabolic marker and selenium levels. Pearson's correlation was performed to analyze the association between selenium status as independent variable and biochemical marker of metabolic syndrome as dependent variable for cardiovascular disease.

Result. In the proportion of the subjects, we found a negative correlation between monocyte chemoattractant protein-1 (MCP-1) and plasma selenium level and a positive correlation between diastolic blood pressure and plasma selenium level.

Conclusion. While there are many finding suggested not overall association between selenium level and the risk for development of cardiovascular disease, our finding support a link between plasma selenium and metabolic syndrome as multiple risk for cardiovascular event.

Keywords

Metabolic syndrome, selenium levels, cardiovascular disease.