

Plasma Level of Homocysteine, Folic acid and Cobalamine in Patients suffered from myocardial infarction

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Abstract

Introduction: Homocysteine is produced by demethylation of methionine. Many reports confirm the correlation between hyper homocysteinemia and cardiovascular disease. This study was aimed at determining the effect of B12 and folate deficiency on the homocysteine level after myocardial infarction.

Materials and methods: The subjects of This descriptive-analytic study were patients with myocardial infarction (N = 48) and healthy patients (N = 48) Eliza method was used to assay Homocysteine and RIA for folic acid and vitamin B12.

Results: the difference between the homocysteine Level of the case ($30.3 \pm 5.3 \mu\text{m/l}$) and the control group (11.1 ± 3.1) is significant ($p < 0.001$). There is no significant difference between Serum B12 in case ($297.1 \pm 208.9 \text{ pm/l}$) and control group (261.5 ± 205.3) and it is true about Serum folic acid of case ($3.9 \pm 2.9 \text{ ng/m}$) and control group (4.3 ± 3.5). The homocysteine level of all patients and four of healthy subjects is higher than normal. The folic acid Level of 11 patients and four healthy subjects is less than normal.

Conclusion: since the homocysteine level of patients is three times of control group and this difference is not related to decrease of B12 Level, Physicians must pay attention to The other risk factors.

Key words: Folic acid, Homocysteine, Myocardial Infarction, cobalamine, cardiovascular disease.