ASSOCIATION BETWEEN PHARMACOTHERAPY ADHERENCE AND CLINICAL AND LABORATORY PARAMETERS IN PATIENTS AFTER MYOCARDIAL INFARCTION

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Keywords: *Myocardial infarction; pharmacotherapy adherence; MMAS-8; left ventricular ejection fraction; lipid profile; triglycerides; atherogenic index; cardiovascular disease.*

Introduction

Reduced adherence to pharmacotherapy is an important factor that may complicate the long-term management of patients after myocardial infarction. Previous studies have demonstrated that adherence to secondary prevention therapy after acute coronary syndrome remains suboptimal, with substantial variation between medications and patient populations [1,2]. Regular use of prescribed medications is essential for maintaining treatment goals and reducing cardiovascular risk after myocardial infarction [3,4].

The 8-item Morisky Medication Adherence Scale (MMAS-8) is a commonly used standardized instrument for assessing medication adherence and has been evaluated in cardiovascular patient populations [5]. Therefore, assessment of pharmacotherapy adherence in combination with clinical, echocardiographic, and biochemical parameters is of practical importance in the follow-up of patients after myocardial infarction.

Aim

To determine the association between the level of pharmacotherapy adherence assessed using the 8-item Morisky Medication Adherence Scale (MMAS-8) and

cardiac systolic function and selected biochemical parameters in patients after myocardial infarction.

Materials and Methods

The study included data from 51 patients who were treated in the Cardiology Department of the Multidisciplinary Clinic of Tashkent State Medical University, including patients who subsequently sought medical care again. Pharmacotherapy adherence was assessed using the 8-item Morisky Medication Adherence Scale (MMAS-8). Echocardiographic assessment included left ventricular ejection fraction (LVEF). Laboratory parameters included total cholesterol, low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides, atherogenic index, glucose, creatinine, alanine aminotransferase (ALT), aspartate aminotransferase (AST), and coagulation parameters. The Spearman correlation coefficient was used to assess the associations between MMAS-8 scores and the studied parameters. A p-value <0.05 was considered statistically significant.

Results

The mean left ventricular ejection fraction in the first group was 60.04±6.47%, whereas in patients who subsequently sought medical care again it was 50.86±11.14% (p=0.002). The mean triglyceride level in patients who subsequently sought medical care again was 2.12±0.88 mmol/L, compared with 1.54±0.52 mmol/L in the first group (p=0.021). The atherogenic index was also higher in the group of patients who subsequently sought medical care again, reaching 4.61±0.55 compared with 3.98±0.97 in the first group (p=0.022). ALT levels were higher among patients who subsequently sought medical care again, and the difference between the groups was statistically significant: 32.58±23.77 U/L versus 22.72±11.59 U/L, respectively (p=0.013). Correlation analysis demonstrated a statistically significant positive association between MMAS-8 scores and left ventricular ejection fraction (Spearman r=0.313; p=0.026). At the same time, a statistically significant negative correlation was identified between MMAS-8 scores and HDL-C levels (r=-0.345; p=0.027). Correlations between MMAS-8 scores and the other assessed parameters were not statistically significant.

Conclusion

In the studied group, the level of pharmacotherapy adherence demonstrated a statistically significant positive association with cardiac systolic function and significant associations with selected parameters of lipid metabolism. Patients who subsequently sought medical care again had lower ejection fraction values, higher triglyceride levels, a higher atherogenic index, and higher ALT levels.

These findings support the importance of comprehensive assessment of pharmacotherapy adherence together with clinical, echocardiographic, and laboratory monitoring in patients after myocardial infarction. The importance of adherence to evidence-based secondary prevention therapy is also emphasized in current ESC recommendations for patients with acute coronary syndromes [4].

References

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