

AMERICAN Journal of Pediatric Medicine and Health Sciences

Volume 2, Issue 2, 2024 ISSN (E): 2993-2149

Effect of Glycemia on Early Prognosis of Patients with a History of Myocardial Infarction without 2 Type Diabetes

Rizayeva Mekhriban Ahmadovna

Department of Internal Medicine and Endocrinology, Bukhara State Medical Institute, Uzbekistan

Abstract: Goal. To determine the effect of glycemic levels recorded during hospitalization for myocardial infarction (MI) on the early prognosis of patients without previously diagnosedдиа-бетаtype 2 diabetes 2 mellitus (DM - 2).

Material and methods. A prospective examination of 296 patients was performed. Three groups were formed according to the level of glycemia at admission: I - □4.0 mmol/1 (7.4%); II-4.01—7.79 mmol/1 (69.9%); III — □7.8 mmol/1 (22.6%). The частота incidencee- of нарушений carbohydrate metabolism disorders and развития MI complications ИМ in the hospital period was studied.

Results. In 2/3 of patients with glycemia □7.8 mmol/l at поступле- нииаdmission, later according to the standard glucose tolerance test (СТG) выявлены нарушения , carbohydrate metabolism disorders were detected: prediabetes (36.9%) and СД-2 type 2 diabetes (32.3%). У Patients III in group III were more likely to have three- fold поражение coronary artery disease (41.8%) and MI complications : congestive left ventricular failure-52.2% vs 27.3% in group I and 34.1% in II group II (p=0.017), cardiogenic shock - 26.9% vs 4.5% and 6.8% (p<0.001), нарушения conduction disturbances — 27.3% vs 9.1%

and 11.7% (p=0.006), hospital mortality — 13.8% vs 4.5% and 4.4% (p=0.025). The risk of летального death in patients with glycaemia \Box 7.8 mmol/ L was в 3.48 (95% CI: 1.41–8.60) times higher than при in patients with normal-glycaemiaниях(p=0.007). The glycemic index at admission was independently associated with the development of MI complications in the hospital period — OR=1.128; 95% CI: 1.005–1.266 (p=0.042), along with воз- age, depth of myocardial damage, and systolic blood pressure at admission.

Conclusion. Early MI complications were more common among patients without a history of DM-2 who had a glycemic index at admission of □7.8 mmol/ 1 (22.6% of patients), чаще встречались ранние осложнения ИМ, and the risk of hospital mortality was 3 times higher than in other patients. The glycemic index at admission was an independent predictorofan unfavorable prognosis for MI in patients without previously diagnosed DM-2 and should be used in secondary- prevention measures вторичной.

Keywords: admission glycemia, hyperglycemia, myocardial infarction, early prognosis.

Introduction

B For several decades , the problem of glycemic variability in response to acute maladaptation of the body in myocardial infarction (MI) has been studied [1-2]. To dateспе, specialists have not come to a consensus on the limits of ассерtable значений glycemic

values y in patients with MM MI in the first days of treatment that do not require correction, which makes it difficult to monitor such conditions and treat them [1-3].

Most researchers evaluated hypoglycemiap-гликемию (GG) in ИМ у MI in patients with сахарным диа-type2dbtesmellitus (DM - 2) [2, 4-5]. It has been proven that in such patients ГГ практически, GH almost pasa doubled - the state mortality rate, as well as the probability of other complications, such as фибрилляция ventricular fibrillation, cardiogenic shock, and congestive left ventricular failure [6, 7]. In the presence of DM-2, a U-shaped mortality curve was revealed, indicating TOM, that both low TAK and high levels of glycemiay in patients with MI are associated with a high frequency of adverse outcomes [3, 9].

Повышенные уровни гликемии у пациентов без According to other researchers, elevated glycemic levels in patients without DM-2 данным других исследователей недоста- are often poorly diagnosed and corrected in a timely коррекции manner [3, 8]. However, published studies that suggest TOM, that the prognosis of patients with GH with a history of MI по поводу ИМ without diabetes mellitus (DM)в анамнезе may be even worse than v in patients with DM [3] require close attention and further merostudy. In patients without previously verifiedo- DM - 2, researchers identified both a U-Hyioshaped mortality curve and a direct linear relationship with the level of diabetes.

However, hypoglycemia at admission and its impact Ha ono-prognosis in MI in this group of patients крайне are rarely evaluated, and conclusions are contradictory [4, 10]. Таким Thus, monitoring of glycemia y in patients without СД-2 a history of DM-2 анамнезе is an important goal fordetermining the management of patients with MMMI.

The aim of the study was to determine the effect уровней of glycemic levels recordedduring hospitalization forMI on early y prognosis in patients without previously diagnosed DM-2.

Material and methods

A continuous sample of patients Bo3pa- creaged <80 years who were hospitalized for MI in the First вуюСity Clinical Hospital named after E. E. вичVolosevich in Arkhangelsk for one year was examined. The study included 364 patients (63.4% men). The diagnosis y of MI in patients was verified according to the universal definition of the European Society of Cardiology from 2007. г. Of these y, 68 patients had a history был of DM-2, and therefore they were excluded from subsequent analysis;- лиза, выборка the prospective study sample consisted of 296 patients. собрана Information was collected on the time of admission to the hospital, the primary and localization of MI, the presence of concomitant diseases: obesity, arterial hypertension, кровообраща history of acute cerebrovascular accident- (ACVI), smoking, systemic ro thrombolysis, coronary angiography and balloon angioplasty (BAP) of the coronary arteries with stenting- нием, the presence of complications, as well as the outcome of MI. The тывались data on systolic blood pressure (SBP) and heart rate at admission and the results of laboratory examination were taken into account: the level of creatine phosphokinasea- тинфосфокиназы (CPK) and its MV fraction.

Patients with stabilization of the state after MI for 10-14 days. In the absence of manaesthetic or first выявленных - time signs of diabetes в утренние часы, а standard тест толерантно- glucose tolerance test (CTG) was performed in the morning hours after hospitalization. Glucose levels were measuredon an empty stomach and 2 hours after exercise. Criteria for the diagnosis of impaired tolerance to глюglaucoma козе and newly diagnosed DM - 2 (CHD-2) were used according to WHO (1980, revised 2006).

Statistical analysis was performed using программы the SPSS for Windows v. 13.0 program. Quantitative при-signs with a different distribution from the normal distribution are presented in the form of median (Me) and percentile ranking-вания(25 and 75 percentiles). The differences between the study groups were estimated using nonparametric (U - критерий Mann-Whitney criteria) criteria for Bequantitative values and с using \Box^2 for nominal variables. При Multiple comparisons использовались однофактор- ный were performed using univariate analysis of variance, тест Kruskal-Wallis test, \Box^2 using Pot Hoc Hocpaired comparisons with Bonferroni correction and точным тестом Fisher's exact test with a critical уровнем significance level of 0.016. Logistic regression analysis was used to determine the effect of admission glycemia on the development of a combined endpoint that includes the following MI complications: acute myocardial infarction (MI): acute myoc

Results

In the analysis, 296 patients were divided into three groups according to the venous plasma glucose level at admission, determined at any time в during the day: with a "reduced glycemia levele-" мии" with значении a glucose value of < 4.0 mmol/ 1 (group I); with a normal level of glycemia recommended for patients during MI treatment (group II group) — 4.01-7.79 mmol/ 1; with an increased level глике- of glycemia $\Box 7.8 \text{ mmol/} 1$ (iiigroup III).

In the general sample, glycemia at admission was 6.0 (5.1–7.5) mmol/l. It was noted that 30.1% of all patients hospitalized with MI (89 patients out of 296) had гликеglucose values мии at admission that went beyond the normal values: an increased level of-glycemia — 67 (22.6%) people, a reduced level of glycemia — 22 (7.4%) people (table 1).

69.2% of patients iiiin group III were diagnosed with prediabetes and CHD-2 upon further admission to the CTG. In 1/3 of patients with a normal level of glycemia at admission, further violations of carbohydrate metabolism were foundи-, more than in the absolute majority больных of patients—prediabetes (Table 1).

When analyzing the main characteristicsof- patients with a reduced level of glycemia at admission-нии, it was revealed that this group is represented in the overwhelming majority by men of working age with a lower frequency of spread перенесенного of a previous STROKE. At этом the same time, they не did notdiffer лись from other groups in ишемической terms of the history of coronary heart disease сердца (СНD) в . Patients in this group were more often hospitalized with acuteceST - elevation coronary syndrome-(ST-ACS). The average glycemic index of this group of patients at admission соста- was 3.5 (3.0 - 3.9) mmol/l. Patients of group I впо- did not subsequently have carbohydrate metabolism disorders according to CTG results .

If we trace the post- treatment glycemic levels in patients with various variants of carbon-water metabolism detected later during CTG- нии , then, according точке to the separation point of 7.8 mmol/l, an increased level of glycemia was detected in 18 (56.3%) people with CHD-2 and y in 23 (24.7%) patients with impaired glucose tolerance compared thur c 15 (8.9%) patients with normal carbohydrate нымметаbolism (p<0.001). There was a tendency for a higher frequency сниженного of reduced glycaemia (\Box 4.0 mmol/l) when entering the group with нормаль-полючным carbohydrate metabolism, but no significant intergroup differences were found не было — 16 (9,6%), 5 (5,4%), 0 (0%) patients in groups of patients without нарушений carbohydrate metabolism disorders, with prediabetes and CHD-2, respectively (p=0.326).

According to the results of coronary angiography , patients with glycemia >4.0 mmol/l were significantly more likely

имели трех-compared to patients with reduced glycemia,- мии 13.6 % of patients in i group I, 41.5% in ii group II, and 41.8% in group III had cardiovascular damage to the coronary arteries в iii группе (p=0.036). However , по было найдено intergroup differences were found in the tactics of restoring coronary blood flow, в including the frequency of using thrombolytic therapy - 22.7%, 30.2% and 29.9%, respectively (p=0.763) and BAP with stenting—27,3%, 42,0%, 44,8%, соответ-акадуственно, (p=0.341). Conservative лечение treatmenty-wascarried out according to the existing standards of therapy. In 34 (50.9%) patients iii of group III значения , glucose values at admission were >10.0 mmol/ l, y in 30.9% of patients in this group проводилась , insulin therapy was performedи-нотерапия in the hospital to correct GH.

У Patients iii of group III were поступлении significantlya- more likely to have major complications of the MI hospital period ИМ (Table 2). У 79.1% of patients in this group had Killip Killip ii–iV OS, у 35.8% — нарушения ритма had cardiac arrhythmias, у and 27.3% — нарушения had conduction disorders. Such rare MI complications as gastrointestinal bleeding, развиОNМС development, and the stent thrombosis стента, were observed only in patients from the normoglycemic group— 1,0%, 2,4%, 5,6%, accordingly, however, no statistically significant intergroup differences were found in these indicators (p=0.646, p=0.534, p=0.223, соот-respectivelyветственно).

The hospital mortality rate of the total sample of patients was 7.1%. The level of hospital mortality (Table 2) in patients with hypertension μ кемии 7.8 mmol/1 (13.8%) was 3 times higher тако-вой y than in patients with reduced ypobhem glycemia and c normoglycemia at admission (p=0.025). Glycemia at admission in deceased patients was significantly higher than in discharged patients — 7.5 (6.6-12.3) vs 5.9 (5.1–7.4) mmol/1 (p<0.001).

Risk of летального death in case of glycemia

>7.8 mmol/ L was 3.48 (95% CI: 1.41–8.60) times higher than при normal значениях glycemic values (p=0.007).

The frequency комбинированной of the combined endpoint among all patients was 61.6%. Многофак Multivariate торный analysis showed (Table 3) that the level of glycemia at admission was an independent predictor of the development of an unfavorable prognosis, and with an increase in the value of glycemia by 1 mmol/1, the risk of complications during госпитализа- ции hospitalization increased by 12.8% (p=0.042). Blood glucoseu- levels at admission y in patients with наличием MI complications were also higher than пациен- in patients without complications during период the hospitalization period — 6.3 (4.9–6.5) vs 5.8 (5.3–8.1) mmol/ 1 (p=0.002). Factors that independently affected the prognosis were also the patients 'age, Q wave presence, ando-вень SBP level at admission.

References References

- 1. Rizayeva M.A, Yahyoyeva H.Sh a common symptom of anemia in diabetic nephropathy Academicia: An International Multidisciplinary Research Journal 2021.— P. 1683-1686
- 2. Mehriban Akhmadovna Rizayeva. A common sign of anemia in diabetic nephropathy..... Biology and Integrative Medicine, 2021----P. 121-127
- 3. H Sh Yakhyoyeva, MA Rizaeva. Analysis and assessment of anthropometric body mass index for women of fertilized age in Bukhara region...... Academicia: An International Multidisciplinary Research Journal 2021.— P. 43-46
- 4. Hilola Sharifovna Yakhyaeva. A COMMON SIGN OF ANEMIA IN DIABETIC NEPHROPATHY.... Scientific progress 2021 --- P. 183-185

- 5. H.Sh Yakhyaeva. TYPE 2 DIABETES MELLITUS IN CHILDREN AND ADOLESCENTS OF THE BUKHARA REGION. // Biology and Integrative Medicinea / / 1 (48) 2021— P. 139-145.
- 6. Yaxyayeva Hilola Sharifovna. Thyroid Cancer Diagnostics, Classification, Staging. Journal of Innovations in Social Sciences...2021—P. 63-69
- 7. Orzikulova Shakhlo Akmalovna. Obesity And Hypertension Among Men Летнего Aged 18-49 Years.....International Conference on Social and Humanitarian Research ...2021—P. 160
- 8. Orziqulova Sh. A. Thickness of epicardial adipose tissue as a predictor of cardiovascular risk...... ACADEMICIA: An International Multidisciplinary Research Journal 2021.— P. 73-78
- 9. Khasanov Mukhriddin Hayatovich. Changes in corneal thickness in patients with different stages of primary open-angle glaucoma.... Academicia: An International Multidisciplinary Research Journal 2021.— P. 216-22