



## MODERN VIEWS ON THE CLINICAL COURSE OF UNSTABLE ANGINA IN PATIENTS WITH METABOLIC SYNDROME

Isokova Shakhzoda Kuichi kizi

Master degree

Samarkand State Medical University, Samarkand, Uzbekistan

<https://doi.org/10.5281/zenodo.11044738>

**Annotation.** Cardiovascular diseases (CVDs) are the leading cause of disability and death worldwide. Thus, currently, in the structure of population mortality, 57% are diseases of the cardiovascular system, of which 49.3% are due to coronary heart disease (CHD). The study of coronary heart disease, and in particular unstable angina (UA), its complications, and the effectiveness of treatment, dictates the need to study risk factors. It is known that metabolic disorders such as excess body weight, dyslipidemia, and impaired glucose metabolism accelerate atherogenesis. All these disorders are components of metabolic syndrome (MS). The issue of the effect of MS on the cardiovascular system has been studied in sufficient detail in the literature, however, the effect of the syndrome on the results of angioplasty procedures and the long-term prognosis of MS requires further study.

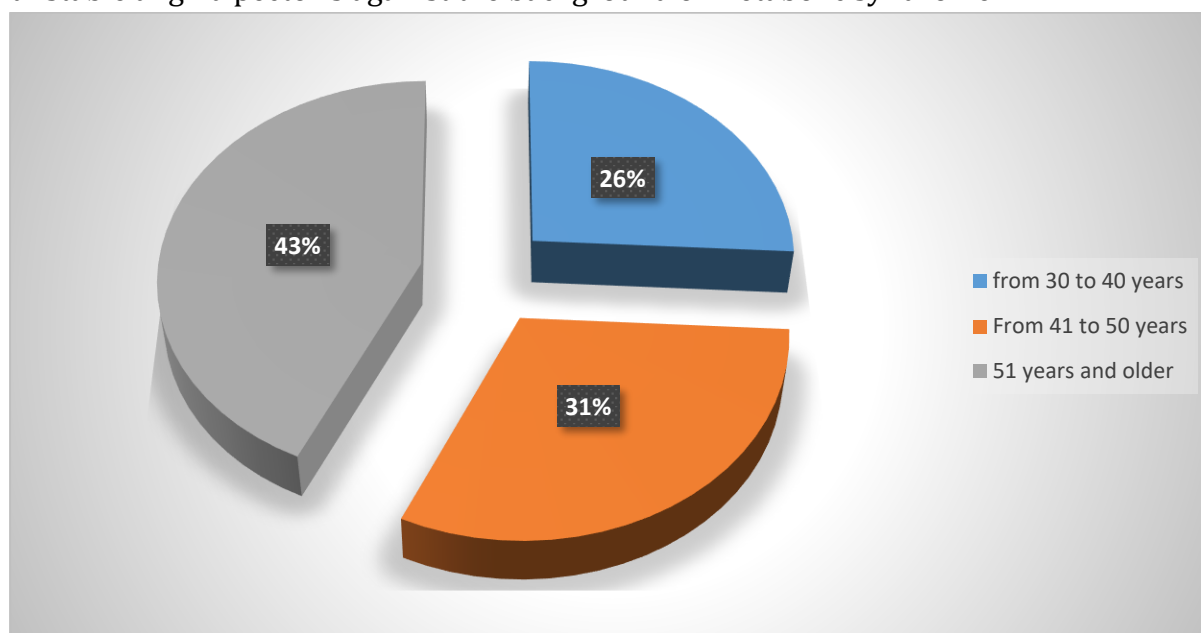
**Keywords:** cardiovascular diseases, unstable angina, metabolic syndrome, coronary heart disease, arterial hypertension.

**Relevance.** Over the past 20 years, a large number of studies have been conducted that have confirmed the close relationships between obesity, arterial hypertension (AH), hyperlipidemia, impaired glucose tolerance, and cardiovascular diseases. The term “metabolic syndrome” combines a group of risk factors associated with coronary heart disease and/or diabetes. According to several authors, in patients with MS, the risks of major cardiovascular events (CVEs) increase stroke, acute myocardial infarction (AMI), and sudden death. Patients with metabolic syndrome are characterized by more massive damage to the coronary arteries, a more severe course of coronary artery disease, and a decreased quality of life. Separately, it should be noted that MS is widespread (according to some authors, more than 20% of the planet's population). However, despite the active study of MS, in the available literature, including publications of leading cardiological and endocrinological associations, there are no clinical recommendations for the management of these patients. The practical importance of these unresolved issues determined the purpose and objectives of this work.

**The aim of the study:** to examine modern views on unstable angina based on studying its features in patients with metabolic syndrome.

**Materials and methods.** The study was conducted at the Department of Internal Diseases of the Pediatric Faculty of Samarkand State Medical University, in the cardiology department of the Samarkand City Hospital for the period 2021-2023. All patients in the department were subjected to a thorough comprehensive examination, as a result of which, by the purpose of the study, 58 patients with coronary artery disease and metabolic syndrome were selected according to the inclusion criteria as the main study group. The control group consisted of 20 patients with IHD without MS.

The work is based on an analysis of the results of the examination and dynamic observation of 58 patients of various ages (Diagram 1) with the main diagnosis of coronary artery disease - unstable angina pectoris against the background of metabolic syndrome.



**Diagram 1. Distribution of patients in the main group by age**

The study used subjective analysis of complaints and assessed from anamnestic data:

- history of arterial hypertension, duration of the disease, whether previous treatment was carried out;
- the presence of somatic pathologies
- the presence of diabetes mellitus and a method for correcting carbohydrate metabolism disorders, if present;
- presence of previous myocardial infarction, endovascular interventions, damage to other large arteries (lower limbs, vessels of the vertebrobasilar region);
- bad habits (such as smoking, drinking alcohol, etc.).

**Results and discussion.** Patient data were collected prospectively based on medical history and physical examination.

The age of the patients in the main group was from 30 to 65 years, the average age was  $56.4 \pm 3.2$  years. The average age of the control group was  $59.1 \pm 2.7$  years. In the age category, patients over the age of 51 years predominated (43%), for comparison, in the control group, patients older than 53 and above also predominated (55%), but patients in the age category 30-40 years were 2.6 times less common (10%).

#### Distribution of patients by gender and age

Groups	Gender		Age groups					
	Female	Male	30-40 age		41-50 age		older 51	
			n	%	n	%	n	%
Main	30 (51.7%)	28 (48.27)	15	25,86	18	31,03	25	43,1
Comparisons	10 (50%)	10 (50%)	2	10,0	7	35,0	11	55,0

This study was conducted at the Department of Internal Research No. 3 (in the Cardiology Department of Samarkand City Hospital) of Samarkand State Medical University during 2021-2023.

The main study group consisted of 58 patients with unstable angina and metabolic syndrome. Clinical and laboratory data of patients were studied and risk factors were identified, gender characteristics and immediate outcomes were studied. The control group consisted of 20 patients with unstable angina without MS.

Arterial hypertension in acute coronary syndrome was diagnosed based on medical history. Blood pressure levels were determined in all patients during hospitalization. In women in the control group, systolic pressure was  $145.3 \pm 18.3$  mm Hg. Art., diastolic -  $91.7 \pm 11.2$  mmHg; in women of the main group -  $154 \pm 10.7$  and  $98.1 \pm 8.4$  mmHg. respectively. In men with MS, systolic pressure was  $160.4 \pm 9.3$  mm Hg, diastolic pressure was  $90 \pm 11.7$  mm Hg. Art.; in men from the control group -  $131.1 \pm 22.9$  and  $81.1 \pm 10.9$  mm Hg. Art. respectively.

Based on these data, we can conclude that an increase in blood pressure was recorded in both groups of studies, but in the main group, against the background of MS, the rise in blood pressure was higher than in the control group.

Table 2 presents complaints from hospitalized patients and a history of bad habits such as smoking.

#### Analysis of complaint data

Complaints		Main group (n=58)		Comparison group (n=20)		p
		Men n=28	Women n=30	Men n=10	Women n=10	
1	Chest pain	64,28%	60%	90%	80%	0.03
2	Dyspnea	67,8%	83,3%	20%	20%	0.05
3	Interruptions in heart function	28,57%	30%	20%	10%	0.01
4	Nausea	23,33%	21,4%	20%	10%	0.01
5	Oppression of consciousness	10,7%	6,67%	10%	5%	0.01
6	Weakness	100%	100%	90%	80%	0.01
7	Smoking	90%	7,14%	70%	-	0.05
8	Wheezing in the lungs	64,28%	60%	30%	20%	0.05
9	Alcohol consumption	31,03%	1,72%	10%	-	0.05
10	Interruptions in heart function during auscultation	28,57%	30%	20%	10%	0.01

The table shows that in patients with metabolic syndrome, painless forms of acute coronary syndrome were more common than in the control group. This is most likely due to the higher incidence of type 2 diabetes mellitus and the development of diabetic neuropathy among

patients. In addition, 90% of hospitalized men from the main group and 70% from the control group smoked. This may perhaps explain the earlier onset and peak incidence of coronary artery disease in men compared to women.

In addition, you can notice that in the group with MS, the presence of bad habits is much higher. Alcohol consumption, obesity, and a sedentary lifestyle could lead to the development of metabolic changes in the body, creating conditions for disruption of the constants of other systems.

When studying the history of patients, it was revealed that in the main group, 40 (70%) had chronic somatic diseases such as chronic pyelonephritis (12.07%), chronic bronchitis (70%), diabetes mellitus (DM) type 2 (15, 5%), IHD (51.72%). In 5 (8.62%) patients there was a combination of three pathologies, in 20.68% there was a combination of two somatic diseases. In the control group, 6 patients (30%) had somatic pathologies in the form of chronic pyelonephritis, chronic bronchitis, and ischemic heart disease. Type 2 diabetes in the second group was not observed in any patient, but the combination of ischemic heart disease and chronic bronchitis was determined in 25% of smoking men.

**Conclusion.** The study showed that in the conditions of Samarkand, in women with metabolic syndrome, unstable angina develops earlier than in men by age, but the course of unstable angina in the presence of metabolic syndrome is complicated in both men and women. The clinical picture in men was worse than in women.

The immediate outcomes of unstable angina in women and men with metabolic syndrome in our study were transition to stable angina in 50% of cases, almost all patients had cardiac conduction disturbances (68.3%), cases of myocardial infarction occurred in 20.7% where men predominated, in our study, although the patients were in serious condition at the time of admission, there were no deaths.

Echocardiography revealed that in patients with metabolic syndrome, changes in the myocardium of a metabolic nature occur that impair compensatory abilities and impair blood flow in the myocardium; in addition, the diagnosis of unstable angina was confirmed in all patients in the form of myocardial infarction, elevation or depression of the ST segment, rhythm disturbances, and cardiac conductivity..

### References:

- 1.Алмазов В.А., Шляхто Е.В., Красильникова Е.И. Метаболический сердечно-сосудистый синдром. СПб.: Изд-во СПбГМУ; 1999.
- 2.Авалиани В. М., Попов В. А., Мартюшов С. И. Новые взгляды на механизм развития атеросклероза обзор литературы //Экология человека. – 2005. – №. 4. – С. 24-30.
- 3.Бокерия Л. А. и др. Сердечно-сосудистая хирургия-2017. – Федеральное государственное бюджетное учреждение" Национальный научно-практический центр сердечно-сосудистой хирургии имени АН Бакулева" Министерства здравоохранения Российской Федерации, 2018.
- 4.Бабамурадова З. Б., Насирова А. А., Искандарова Ф. И. ЭНДОТЕЛИАЛЬНАЯ ДИСФУНКЦИЯ ПРИ ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТИ В СОЧЕТАНИИ С САХАРНЫМ ДИАБЕТОМ //Journal of cardiorespiratory research. – 2021. – Т. 1. – №. 3. – С. 49-52.
- 5.Бабенко А. Ю. и др. Метаболический синдром. – 2020.

- 6.Бурков С.Г., Ивлева А.Я. Избыточный вес и ожирение - проблема медицинская, а не косметическая. Ожирение и метаболизм. 2010; 3: 15-9. EDN: MVNBIT.
- 7.Киямова Л. и др. СИМПТОМА «НИШИ» ПОСЛЕ КЕСАРЕВА СЕЧЕНИЯ //Центральноазиатский журнал образования и инноваций. – 2024. – Т. 3. – №. 1 Part 3. – С. 65-68.
- 8.Шопулотов Ш., Абсаматов Ш., Холдоров И. ГИПЕРАКТИВНОСТЬ ДЕТРУЗОРА: СОВРЕМЕННЫЕ ВОЗМОЖНОСТИ ТЕРАПИИ //Евразийский журнал медицинских и естественных наук. – 2022. – Т. 2. – №. 6. – С. 409-411.
- 9.Amirzoda T. S., Asliddinovich S. S. НЕДЕРЖАНИЕ МОЧИ И НЕУДЕРЖАНИЕ МОЧИ: КАЧЕСТВО ЖИЗНИ ПАЦИЕНТОВ //JOURNAL OF BIOMEDICINE AND PRACTICE. – 2022. – Т. 7. – №. 5
10. Khudoyarova D., Yusupov O., Shopulotova Z. VARICOSE VEINS AND PREGNANCY: CAUSE OR NOT //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 766-769.
- 11.Shopulotov S., Isroilov O. GIPERAKTIV QOVUQ SINDROMINI DAVOLASH BO'YICHA YANGI IMKONIYATLAR //Бюллетень студентов нового Узбекистана. – 2023. – Т. 1. – №. 6 Part 2. – С. 106-109.
- 12.Shopulotov S. et al. SIYDIK TUTOLMASLIK MUAMMOSI //Центральноазиатский журнал образования и инноваций. – 2023. – Т. 1. – №. 6 Part 6. – С. 44-48.
- 13.Shopulotov S. et al. GIPERAKTIV QOVUQ SINDROMINI TASHXISLASHDA ZAMONAVIY YONDASHUVLAR //Молодые ученые. – 2023. – Т. 1. – №. 9. – С. 38-42.
- 14.Shopulotov S., Shopulotova Z., Supkhonov U. ETIOLOGY STRUCTURE OF OVERACTIVE BLADDER IN MODERN UROLOGY //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 635-639.
- 15.Shopulotova Z. COMPARATIVE ANALYSIS OF CLINICAL CASES OF EXACERBATION OF CHRONIC PYELONEPHRITIS IN PREGNANT WOMEN //International Bulletin of Medical Sciences and Clinical Research. – 2023. – Т. 3. – №. 8. – С. 22-25.
- 16.Shopulotova Z., Shopulotov S., Kobilova Z. MODERN ASPECTS OF HYPERPLASTIC PRO //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 787-791.
- 17.Shopulotov S., Shopulotova Z., Tursunova D. DETERMINING MODERN ASPECTS OF TREATMENT IN PATIENTS WITH HYPERACTIVE BLADDER SYNDROME //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 746-751.
- 18.Shopulotova Z., Kobilova Z., Shopulotov S. INFLUENCE OF PREECLAMPSIA ON SOMATIC DISEASES //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 778-780.
- 19.Shopulotov S., Shopulotova Z., Tursunova D. OPTIMIZATION OF OVERACTIVE BLADDER SYNDROME DIAGNOSTIC METHODS //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 740-745.
- 20.Shopulotova Z., Kobilova Z., Shopulotov S. URINATION DISORDERS IN PREGNANT WOMEN //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 774-777.
- 21.Shopulotova Z., Shopulotov S., Kobilova Z. MODERN VIEWS ON THE EFFECTIVENESS OF OZONE THERAPY //Science and innovation. – 2023. – Т. 2. – №. D12. – С. 781-786.
- 22.Xudoyarova D., Tursunov N. SYMPTOMS OF ACUTE ABDOMINAL IN WOMEN OF REPRODUCTIVE AGE //Modern Science and Research. – 2024. – Т. 3. – №. 1. – С. 223-227.