American Journal of Medicine and Medical Sciences 2022, 12(6): 673-676
DOI: 10.5923/j.ajmms.20221206.13

Comparative Analysis of Incidence from Acute Myocardial Infarction among the Elderly and Old Population

Rakhmatova Dilbar Bahriddinovna

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

Abstract Relevance. Myocardial infarction is one of the clinical forms of coronary heart disease, which occurs with ischemic necrosis of the myocardium. Myocardial infarction develops in patients aged 40 to 60 years and most often affects men, it is also the main cause of disability worldwide. The following sentence in the abstract can be summarized: from "Myocardial infarction develops in patients aged 40 to 60 years and most often affects men, it is also the main cause of disability worldwide. Myocardial infarction is the most common disease, which is a common cause of death worldwide" to, for example: "Myocardial infarction develops in patients aged 40 to 60 years and most often affects men, it is also the main cause of disability worldwide, and a common cause of death".

Keywords Epidemiology, Retrospective, Dynamics, Population, Diagnostics

1. Relevance

Myocardial infarction is one of the clinical forms of coronary heart disease, which occurs with ischemic necrosis of the myocardium. Myocardial infarction develops in patients aged 40 to 60 years and most often affects men, it is also the main cause of disability worldwide. Myocardial infarction is the most common disease, which is a common cause of death worldwide [1,9]. In Uzbekistan, the prevalence of this pathology is much more common, and is a socially significant disease, since many patients die from this nosology [1,2]. Scientists have determined that this pathology is most common in economically developed countries. One of the most common pathologies that is the cause of disability. According to WHO, men get sick more often than women [3]. The frequency of acute myocardial infarction according to statistics in men older than 40 years is from 2 to 6 per 1 thousand [4,5]. The urban population gets sick more often than residents in rural areas, but these data must also be taken into account with the possibility of diagnostics, which may not be carried out in rural areas [3,5,10].

In our country, morbidity and mortality from myocardial infarction remain high. In fact, today the diagnosis of MI is based on a clinical assessment of the patient's condition, taking into account the anamnesis, ECG data and specific laboratory parameters. Early diagnosis of myocardial infarction is not a completely solved problem. Recurrent myocardial infarction is accompanied by many complications, more pronounced remodeling of the myocardium of the heart and high mortality. It should be borne in mind that due to the premature use of modern methods of treatment, the number of patients who survived after a primary MI is increasing, and the number of patients with recurrent MI is significantly increasing [6,7,8]. The healthcare system of our region suffers from the lack of interaction between hospitals and polyclinics in the timely admission of patients with myocardial infarction to the dispensary and the strict provision of their treatment.

* Corresponding author:
salimdavlatov@sammi.uz (Rakhmatova Dilbar Bahriddinovna)
Received: May 6, 2022; Accepted: Jun. 3, 2022; Published: Jun. 23, 2022
Published online at http://journal.sapub.org/ajmms

2. Purpose of the Study

To introduce a comparative analysis of the incidence of acute myocardial infarction among the elderly and senile population of the city of Bukhara (According to a retrospective analytical epidemiological study).

3. Materials and Research Methods

Retrospective monitoring was carried out during 2015-2019 and annually information was collected on the primary incidence of AMI according to the statistics department of the Bukhara region of the State Committee of the Republic of Uzbekistan on statistics. Based on these data, all cases of primary morbidity were selected in a selected population of 60-89 years old in the Bukhara region and the

city of Bukhara.

4. Research Results

IHD accounts for 26.6% in the structure of the population's appeals for CVD, and 20.1% in the structure of morbidity among the adult population. The prevalence of coronary artery disease rises sharply with age - from 2-5% at the age of 45-54 years to 11-20% at the age of 65-74 years; lethality in coronary artery disease -3.02%, in myocardial infarction - 4.5% of the number of patients who left hospitals [1,2]. The epidemiology of the incidence of AMI in elderly and senile patients has been studied relatively insufficiently, especially in the regions of Uzbekistan. In this regard, the next goal of our study was a comparative analysis of the incidence of AMI among the elderly and senile population according to a 5-year retrospective analytical epidemiological study in the Bukhara region of Uzbekistan (Table 1).

Over 5 years of observation (from 2015 to 2019), the average annual rate of primary incidence of AMI for the population of 60-89 years old in the Bukhara region and Bukhara was 0.015% and 0.007%, respectively (<0.05) (Table 2). When comparing the first (2015) and the last year of observation (2019), the average prevalence of AMI was significantly higher in the last (almost 2 times, p <0.01). By years, the primary incidence of AMI was among the elderly and senile population in the Bukhara region and Bukhara, respectively: 2015 - 0.009% and 0.006% (p <0.05), 2016 - 0.011% and 0.113% (p <0 .01), 2017 - 0.012% and 0.007% (p <0.05), in 2018 - 0.023% and 0.004% (p <0.001) and 2019 - 0.018% and 0.005% (p <0.001).

Among the population of the region there is a significantly significant increase in the incidence of primary morbidity, and in Bukhara there is a statistically unreliable trend of increasing the prevalence of AMI and a relatively lower incidence of its detection. This indicates that preventive measures against AMI should be more active and early on a regional scale, at least among the elderly and senile population. Since the unfavorable epidemiological situation remains in relation to the "accumulation of pathological characteristics" with the risk of maintaining a further increase in the primary incidence of AMI among the elderly population (Fig. 1).

Table 1. The frequency of primary morbidity from AMI among the elderly and senile population according to retrospective observation

Years of observation	Total population	Primary incidence of AMI				P
		In Bukhara region		Around the city of Bukhara		
		indicator	%	indicator	%	
2015	1815100	173	0,009	17	0,006	<0,05
	275000					
2016	1845730	217	0,011*	31	0,113***	<0,01
	275000					
2017	1869960	224	0,012*	20	0,007	<0,05
	277891					
2018	1899457	448	0,023***	11	0,004	<0,01
	278049					
2019	1924200	348	0,018**	15	0,005	<0,01
	280600					
Total 2015-2019	9354447	1410	0,015*	94	0,007	<0,01
	1386540					

Note: the table shows differences with respect to the 2015 group, the population in the top line for Bukhara region, in the bottom line for Bukhara.

Table 2. 5-year dynamics of the incidence of primary morbidity from AMI among the female and male population aged 60-89 years

Groups of surveyed	Years of observation					P		
	2015 (1)	2016 (2)	2017 (3)	2018 (4)	2019 (5)	<0,05	<0,01	<0,001
	Indicator %	Indicator %	Indicator %	Indicator %	Indicator %			
Male population 60-89 years old	10	19	14	8	13	3-1	-	-
	58,8*	61,3*	70,0**	72,7**	86,7***	4-1 5-1		
Female population 60-89 years old	7	12	6	3	2	1-3	1-5	-
	41,2	38,7	30,0	27,3	13,3	1-4		
Total	17	31	20	11	15	-	-	-
	100,0	100,0	100,0	100,0	100,0			

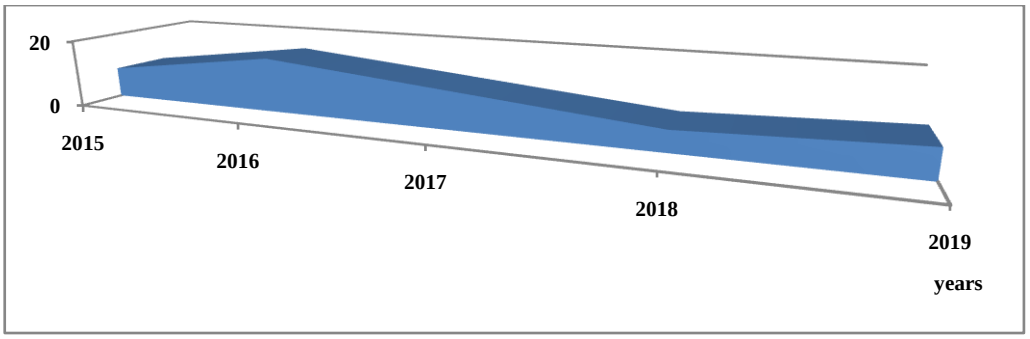

Figure 1. Dynamics of the primary incidence of AMI in the elderly and senile population of the city of Bukhara for the period 2015-2019 (%)

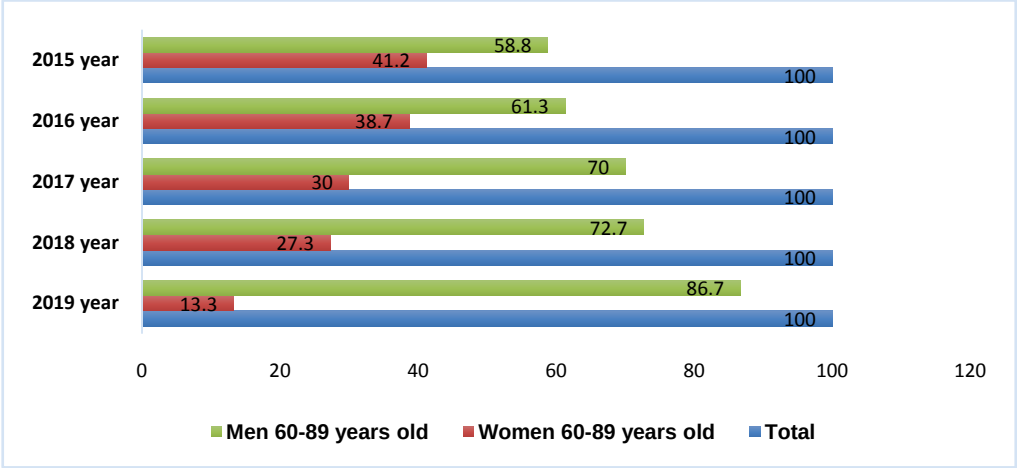

Figure 2. Dynamics of primary incidence of acute myocardial infarction depending on gender in 2015-2019 (in %)

An attempt was made to compare the data on the frequency of 5-year dynamics of primary morbidity from AMI among the male and female population aged 60-89 years in Bukhara. The structure of gender causes of AMI in the analyzed group of elderly patients (94 people) is presented in Table 2.

The incidence of AMI in the examined group of people with AMI (94 people) was statistically significantly higher in older men than in women and, accordingly, by years left: 2015. - 58.8% and 41.2% ($p<0.05$), in 2016 - 61.3% and 38.7% ($p<0.05$), in 2017. - 70.0% and 30.0% ($p<0.01$), in 2018. - 72.7% and 27.3 ($p<0.01$) and in 2019. – 86.7% and 23.3% ($p<0.001$).

Over five years of observation, the primary incidence of AMI in men increased from 58.8% to 86.7%, i.e. by 27.9% or 1.4 times, or annually by 5.6% ($p<0.05$). In the group of elderly women from old age, the opposite was noted - a decrease in the incidence of AMI from 41.2% (in 2015) to 13.3% (in 2019), i.e. by 27.9% or 3.2 times ($p<0.001$). The difference in AMI prevalence by years is statistically significant. The prevalence of AMI and "endpoints" from them increases among men (apparently, this is due to the high frequency of accumulation of risk factors in them), and decreases in women (Fig. 2).

Comparison of the noted data on the incidence of AMI indicates a significant difference in the obtained indicators in men and women of elderly (60-74 years) and senile (75-89) age, and a noticeable difference in rates from MI in the Bukhara region and Bukhara is also striking. Therefore, comparison of the results of the same type of analytical retrospective epidemiological studies conducted on different populations, even within a particular region, is justified, useful and of scientific and practical importance for the implementation of preventive programs among the population. Such an analysis allows not only to give a comparative assessment, but also to identify some general and specific patterns of occurrence and nature of "end points" in AMI at the population level, including in elderly and senile people. Attempts to establish the incidence of myocardial infarction were also made by other researchers, who in their work were based on a retrospective analysis of population data obtained from official sources of information about patients with MI or who died from it [1,2,3].

5. Findings

It turns out that the population of elderly and senile age lives with insufficiently resolved problems before the nosological / early diagnosis and prevention of AMI, which are practically not discussed at the population level. As a result, this can lead to unfavorable epidemiological situations: on the example of Bukhara, according to our data, up to 74.1% in elderly and senile people (up to and 82.8% in men and up to 66.7% in women). It can be assumed that the experience of epidemiological screening will be useful in further regional preventive studies, will serve to unite the

efforts of science and practice in the development of an urgent geriatric problem - the prevention of AMI/CVD in the elderly and senile.

Information about the source of support in the form of grants, equipment, and drugs. The authors did not receive financial support from manufacturers of medicines and medical equipment.

Conflicts of interest: The authors have no conflicts of interest.

REFERENCES

[1] Adizova D.R., Ibrokhimova D. B., Adizova S. R. Adherence to treatment in chronic heart failure // Biology and Integrative Medicine. - 2020. - No. 6 (46). - WITH.

[2] Juraeva Kh.I. Interrelation of myocardial infarction with metabolic syndrome // Biology and Integrative Medicine. – 2019. – no. 4 (32). - S. 66-77.

[3] Juraeva Kh.I., Alimova Sh. Azamat Kizi Adequate assessment of the attitude to the state of one's health among the male and female population // Biology and Integrative Medicine. 2016. №2.

[4] Lambrecht S. et al. Different causes of death in patients with myocardial infarction type 1, type 2, and myocardial injury // The American Journal of Medicine. – 2018. – T. 131. – №. 5. – C. 548-554.

[5] Mavlonov N.Kh. The prevalence of chronic non-communicable diseases among the unorganized population of elderly and senile age // New day in medicine. – 2020. – no. 4. - P. 657-663.

[6] Oganov R.G., Maslennikova G.Ya., Shalnova S.A., Deev A.D. Significance of cardiovascular and other non-communicable diseases for the health of the population of Russia // Disease Prevention and Health Improvement. - 2002. - No. 2. - P. 3-7.

[7] Rakhmatova D. B. Analysis of the risk factors of Chd in persons over 60 years among the population of the city of Bukhara // Asian studies, India. – 2019. – №. 1. – P. 33-38.

[8] Rakhmatova D. B., Rakhmatova D. B. "Main" Symptoms and leading clinical options for the flow of acute coronary syndromes in women // Asian Journal of Multidimensional Research (AJMR). – 2019. – T. 8. – №. 11. – P. 69-74.

[9] Sandoval Y. et al. Type 1 and 2 myocardial infarction and myocardial injury: clinical transition to high-sensitivity cardiac troponin I // The American journal of medicine. – 2017. – T. 130. – №. 12. – C. 1431-1439. e4.

[10] Suissa S. et al. Inhaled corticosteroid use in asthma and the prevention of myocardial infarction // The American journal of medicine. – 2003. – T. 115. – №. 5. – C. 377-381.