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Smrtnost od akutnog infarkta miokarda u Hrvatskoj

Mortality from acute myocardial infarction in Croatia

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SAŽETAK: Akutni infarkt miokarda (AIM), unatoč velikom napretku u dijagnostici, terapiji i prevenciji, ostaje značajan uzrok smrti u suvremenom svijetu. Iako je zadnjih desetak godina došlo do smanjenja stopa smrtnosti u Hrvatskoj, AIM drugi je pojedinačni uzrok smrtnosti u muškaraca, a u žena je na četvrtom mjestu. Usporedna analiza dobnostandardiziranih stopa mortaliteta prema županijama ukazuje na znatno više stope smrtnosti u kontinentalnom dijelu u odnosu na priobalni dio Hrvatske. Stoga treba intenzivno raditi na programima promicanja zdravlja i prevencije bolesti uz snažniju suradnju svih razina zdravstvene zaštite, i odgovarajuću zdravstvenu skrb, kako na razini države, tako i na razini županija uzimajući u obzir specifičnosti i potrebe svake županije.

KLJUČNE RIJEČI: akutni infarkt miokarda, dobnostandardizirane stope smrtnosti, županije, Hrvatska.

SUMMARY: Despite a great advancement in diagnostics, therapy and prevention, the acute myocardial infarction (AMI) remains a great cause of mortality in the modern world. Although the mortality rate has been reduced in Croatia during the last ten years, AMI is the second individual cause of mortality in men and it takes the fourth place in women. The comparative analysis of age standardized mortality rates by counties indicates a significantly higher mortality rates in the continental regions compared to the coastal part of Croatia. Therefore, we should strongly work on programs concerning promotion of health and prevention of diseases with a stronger cooperation of all levels of healthcare and adequate healthcare not only at the level of the state, but also at the level of the county thereby taking specific characteristics and requirements of every county into consideration.

KEYWORDS: acute myocardial infarction, age standardized mortality rates, counties, Croatia.



Akutni infarkt miokarda (AIM) među najčešćim je i najvažnijim uzrocima smrtnosti u razvijenom svijetu, uključujući i Hrvatsku. Kao i većina drugih kardiovaskularnih bolesti (KVB) čija je osnovna patologija ateroskleroza, AIM je u velikoj mjeri preventabilna bolest, što je u čvrstoj vezi sa životnim navikama i promjenjivim fiziološkim čimbenicima. Dokazano je da promjena čimbenika rizika smanjuje smrtnost i pobol od ove bolesti. Usprkos modernim metodama dijagnostike, napretku u liječenju, te primjeni preventivnih mjera, koronarna bolest srca (KBS), uključujući i AIM, uzrokuje nešto manje od polovine smrti od KVB u Europi, a u Hrvatskoj 38,5%, odnosno 10.101 umrlih osoba^{1,2}.

Danas postoje velike regionalne razlike u pojavnosti KVB ukupno, KBS i AIM, ne samo između država, nego i unutar regija pojedine zemlje. Ovo se pripisuje razlikama među populacijama i to u čimbenicima rizika, socio-ekonomskim, psiho-socijalnim čimbenicima te u čimbenicima okoliša, genetskoj podlozi, kvaliteti i dostupnosti zdravstvene skrbi^{1,3}.

Tijekom 2008. godine u Hrvatskoj je umrlo 3683 osoba od AIM (MKB X-I21), što predstavlja 14,0% smrti od KVB, odnosno 7,1% svih smrti u našoj zemlji. Od toga je bilo 60,8% (2241) muškaraca i 39,3% (1442) žena. Opća stopa smrtnosti iznosila je 83,0/100.000 stanovnika. U dobi 0-64 godine umrlo je 999 osoba ili 27,1% umrlih od AIM (36,8% u muškaraca i 12,1% u žena). U usporedbi s 2007. god. bilježi se nešto veći udio umrlih u dobi do 64 godine (25,5%). I u muškaraca i žena u skupini ishemijskih bolesti srca, vodeći je uzrok smrti kronična ishemijska bolest s 6190 umrlih, a slijedi AIM s 3683 umrlih, međutim, infarkt je češći uzrok smrti u muškaraca nego u žena, kod kojih je kronična ishemijska bolest znatno češća kao uzrok smrti (**tablica 1**). Stope mortaliteta značajno su više u muškaraca nego u žena, rastu s dobi, te u muškaraca intenzivniji porast mortaliteta počinje u dobi 45-49 godina, a u žena desetak godina kasnije (**slika 1**).

Acute myocardial infarction (AMI) is one of the most frequent and most important causes of mortality in the developed world, even including Croatia. AMI, as many other cardiovascular diseases (CVD) with atherosclerosis as the main pathology, is mostly preventable disease, which is strongly connected with living habits and changeable physiological factors and it has been proved that the change in risk factors reduces mortality and morbidity. Despite the modern diagnostic methods, the advancement of treatment and the use of preventive measures, the coronary heart disease (CHD), including AMI, causes somewhat less than the half of deaths from CVD in Europe and 38.5% in Croatia or 10.101 dead persons^{1,2}.

Today there are great regional differences in occurrence of total CVD, CHD and AMI not only among different countries but also within specific countries. The reasons for this are the differences in risk populations, socioeconomic, psychosocial factors and environmental factors, genetic factors, quality and accessibility of healthcare^{1,3}.

During the year 2008, some 3683 persons died of AMI (ICD X-121) in Croatia, which is 14.0% of deaths from CVD, or 7.1% of all deaths in our country. From that number, 60.8% (2241) were men and 39.3% were women. The total mortality rate amounted to 83.0/100,000 inhabitants. In age from 0-64, some 999 persons or 27.1% died of AMI (36.8% in men and 12.1% in women). Compared to the year 2007, there is somewhat larger portion of dead people aged under 64 (25.5%). The leading cause of death is the chronic ischaemic disease with 6190 dead person in men and women in the group of ischaemic cardiac diseases, followed by AMI with 3683 dead persons, however, the AMI is a more frequent cause of death in men than in women, with whom the chronic ischaemic disease is much more frequent cause of death (**Table 1**). The mortality rates are much higher in men than in women, they increased with age, and in men a more intense rise in mortality starts from the age of 45 to 49 years of age, and it starts with women some ten years later (**Figure 1**).

Table 1. Ischaemic heart diseases deaths by diagnosis, 2008.

Diagnosis	Total		Male		Female	
	No	%	No	%	No	%
Chronic ischaemic heart disease (I25)	6190	61,3	2430	50,4	3760	71,3
Acute myocardial infarction (I21)	3683	36,5	2241	46,5	1442	27,3
Subsequent myocardial infarction (I22)	223	2,2	148	3,1	75	1,4
Angina pectoris (I20)	5	0,0	5	0,0	0	0
Ischaemic heart diseases (I20-I25)	10101	100,0	4824	100,0	5277	100,0

Source: Croatian National Institute of Public Health, Croatian Central Bureau of Statistics.

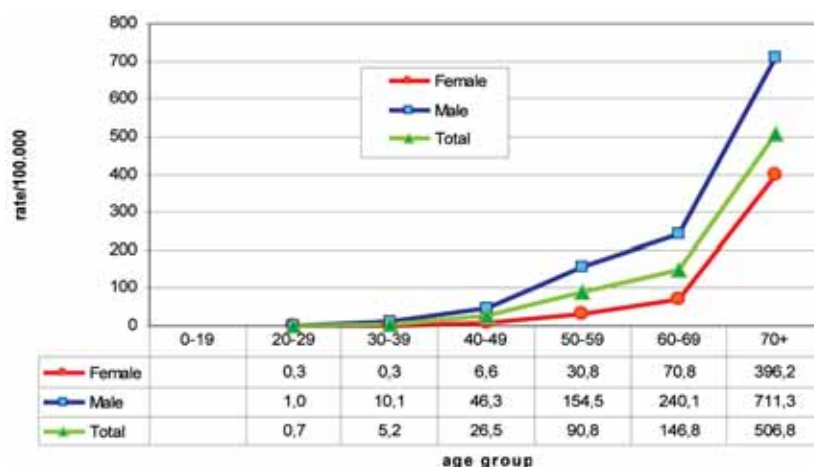


Figure 1. Age-specific mortality rates for acute myocardial infarction by gender, Croatia 2008.

Source: Croatian National Institute of Public Health, Croatian Central Bureau of Statistics.



Opća stopa smrtnosti od AIM u muškaraca, iznosila je 128,5/100.000 u 1998. god., zadnjih deset godina uočava se kontinuirano smanjenje stopa smrtnosti (2008. god. 104,9/100.000 stanovnika). Kod žena stopa lagano oscilira od 1998. do 2005. god., a tek zadnje tri godine bilježi se lagani pad (1998. god. 73,9/100.000, a 2008. god. 62,7/100.000) (slika 2).

The crude mortality rates for AMI in men was 128.5/100,000 in 1998, during the last ten years there is a continuous decrease in mortality rate perceived (in 2008 it was 104.9/100,000 inhabitants). It slightly differed in women from 1998 to 2005 and only during the last three years we have recorded a slight fall (in 1998 it was 73.9/100,000 and in 2008 it was 62.7/100,000) (Figure 2).

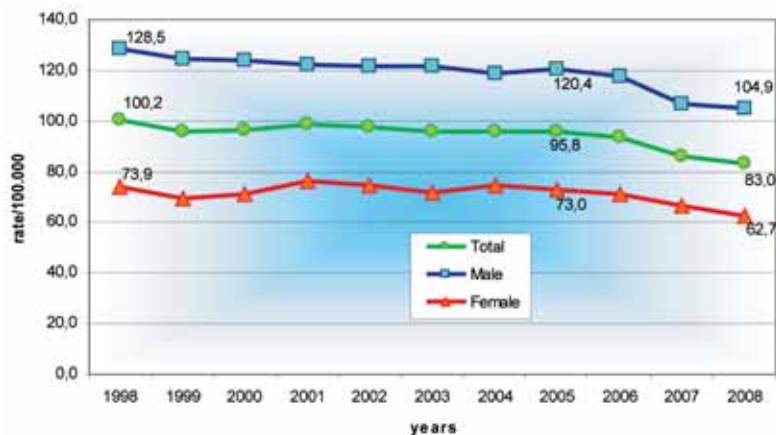


Figure 2. Crude mortality rates for acute myocardial infarction (I21), Croatia 1998-2008.

Source: Croatian National Institute of Public Health, Croatian Central Bureau of Statistics.

Usporednom analizom dobnog specifičnih stopa mortaliteta od AIM za 1991., 2003., 2005. i 2008. god. vidimo da je došlo do značajnog smanjenja stope mortaliteta u svim dobnim skupinama u odnosu na 1991., posebice zadnje 2008. god. Stope smrtnosti znatno su se smanjile u promatranom razdoblju, posebice 2008. i to najviše u dobi 60-69 godine za 44,5% te u dobi 40-49 godina za 38,1%. Izuzetak je dobnog grupa 30 do 39 godina gdje stopa neznatno raste 2008. god., što je zbog vrlo malog broja umrlih u toj dobi teško interpretirati (slika 3).

The comparative analysis of age-specific mortality rates from AMI in 1991, 2003, 2005 and 2008 reveals that a great decrease in mortality rate in all age groups has occurred compared to the year 1991 and especially during the last 2008. The mortality rates have greatly decreased during the perceived period, especially during the year 2008, mostly in age group 60 to 69 by 44.5% and in persons aged from 40 to 49 by 38.1%. The exception is the age group from 30 to 39 where the rate slightly rose in 2008, which is hard to interpret due to a very small number of dead persons at that age group (Figure 3).

Figure 3. Age-specific mortality rates of acute myocardial infarction in Croatia, 1991, 2003, 2005, 2008.

Source: Croatian National Institute of Public Health, Croatian Central Bureau of Statistics.



AIM je, kako na razini države, tako i na razini županija, među vodećim uzrocima smrtnosti, uz prisutne značajne razlike u učestalosti među pojedinim županijama. Za usporedbu mortaliteta među županijama koriste se dobnog standardizirane stope kao najpouzdaniji zdravstveni pokazatelji dobiveni iz rutinski prikupljenih podataka mortalitetne statistike. Dobno standardizirane stope smrtnosti od AIM za 2007. god. kreću se u rasponu od najviše 133,7 u Sisačko-moslavačkoj županiji do 37,8/100.000 u Dubrovačko-neretvanskoj županiji (slika 4). Uglavnom su stope mortaliteta više u kontinentalnom dijelu Hrvatske, a niže u priobalnom dijelu, uz izuzetak Međimurske županije koja

AMI is one of the leading cause of mortality not only at the level of the state, but also at the level of counties along with ever larger differences in frequency among the counties. Age-standardized mortality rates as the most reliable health indicators obtained from the routinely collected data of the mortality statistics are used for comparison of among the counties. Age-standardized mortality rates from AMI in 2007 range from the maximum 133.7 in the County of Sisak and Moslavina up to 37.8/100,000 in the County of Dubrovnik and Neretva (Figure 4). The mortality rates are usually higher in the continental part of Croatia and are lower in the coastal part except for the County of Međimurje which is with the rate of 41.9 included in the group



se sa stopom od 41,9 ubraja u skupinu županija s najnižim stopama smrtnosti. I stope smrtnosti od KVB ukupno po županijama pokazuju sličnu geografsku distribuciju, s podjelom na kontinentalno područje s uglavnom višim stopama i priobalno područje s uglavnom nižim stopama⁴. Razlog takvoj prostornoj distribuciji KVB odnosno nižim stopama smrtnosti u priobalju, vjerojatno je velikim dijelom mediteranska prehrana, kao i cjelokupni mediteranski stil življenja. Međutim, valja napomenuti, da su velike razlike u stopama smrtnosti od AIM po županijama vjerojatno jednim dijelom uzrokovane i razlikama u registriranju uzroka smrti, što bi trebalo posebno analizirati.

of counties with the lowest mortality rates. The rates of mortality from CVD totally by counties show a similar geographic distribution with a division in the continental region with mainly higher rates and the coastal region with mainly lower rates⁴. The reason for such regional distribution of cardiovascular diseases, or lower mortality rates in the coastal region is largely the Mediterranean food and the overall Mediterranean life style. However, it is worth emphasizing that the large differences in rates of mortality from AMI by counties may partly be caused by differences in registration of mortality cause which should be especially analysed.

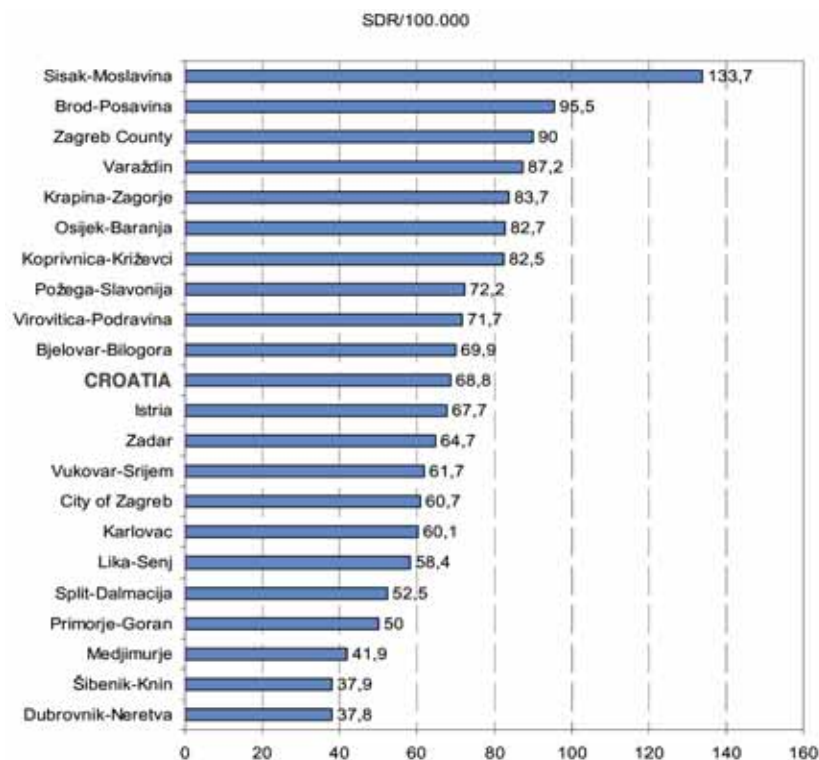


Figure 4. Age-standardized mortality rates for acute myocardial infarction in Croatian counties, 2007.

Source: Croatian National Institute of Public Health, Croatian Central Bureau of Statistics.

Zaključno možemo reći da, iako je došlo do pada smrtnosti od AIM zadnjih godina, ova bolest još uvijek ostaje jedan od vodećih uzroka smrtnosti i prioritetni javnozdravstveni problem. Budući je AIM u velikoj mjeri preventabilna bolest, kao većina drugih KVB čija je osnovna patologija ateroskleroza, potrebno je intenzivno raditi na programima promicanja zdravlja i prevencije bolesti uz snažniju suradnju svih razina zdravstvene zaštite, uključivanje drugih sektora u sprječavanje bolesti te osigurati dostupnost odgovarajuće zdravstvene skrbi. Pri tome treba uzeti u obzir regionalne, odnosno županijske razlike te buduće intervencije prilagoditi potrebama pojedine županije.

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