



## Epidemiologija akutnog koronarnog sindroma u Hrvatskoj i u svijetu

## Epidemiology of acute coronary syndrome in Croatia and worldwide

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Unatoč ogromnog napretka u dijagnostici i liječenju akutni koronarni sindrom (ACS, prema engl. *acute coronary syndrome*), odnosno akutni infarkt miokarda (AMI, prema engl. *acute myocardial infarction*), ostaje značajan uzrok smrti u općoj populaciji. Prema podacima iz *European Hospital Morbidity Database* tijekom 2006. godine liječenje AMI (oznaka I21 prema MKB-10) u Republici Hrvatskoj bilo je uzrokom 0,96% svih bolničkih prijema, dok je prosječna dužina liječenja AMI iznosila 10,39 dana. Podaci iz *European Detailed Mortality Database* (EDMD) za našu zemlju ukazuju da je iste godine AMI bio uzrokom 4.143 smrti, odnosno da je ta bolest uzrokovala 8,22% svih smrti tijekom 2006. godine. Analizirajući podatke o trendu udjela smrti od AMI u razdoblju od 1995. do 2006. godine u Republici Hrvatskoj zamjećuju se samo blage oscilacije (od minimalne 8,10% za 2003. do maksimalne 8,82% za 2001. godinu).

Podaci iz američkog nacionalnog registra AMI ukazuju da se od razdoblja 1990. — 1993. pa do 2003. — 2006. godine broj bolesnika s AMI sa ST-elevacijom (STEMI, prema engl. *ST-segment elevation myocardial infarction*) smanjio sa 64% na 34%. Iako je registrirano blaže povećanje udjela broja bolesnika starijih od 75 godina (s 25% na 30%) nije registrirana bitna promjena u srednjoj životnoj dobi. Udio žena se također nije promijenio i kreće se oko 35%. Podaci iz istog registra za ACS bez ST-elevacije (NSTEMI, prema engl. *non-ST-segment elevation myocardial infarction*) ukazuju na porast udjela s 26% na 66%, dok se ostali podaci za bolesnike starije životne dobi i žene bitno ne razlikuju od prethodno spomenutih. Kako je intervencijska terapija pokazala znatnu dobit u odnosu na konzervativno liječenje, podaci iz istog registra za Sjedinjene Američke Države ukazuju da je u zadnjih 10-ak godina došlo do kontinuiranog porasta broja kateterizacija, perkutanih koronarnih intervencija (PCI, prema engl. *percutaneous coronary intervention*), a broj kardiokirurških zahvata se smanjuje.

Nedavno objavljena analiza primjene reperfuzijskog liječenja u bolesnika sa STEMI uključenih u GRACE studiju

Despite an enormous progress in diagnostics and treatment, acute coronary syndrome (ACS) or acute myocardial infarction (AMI) still remains an important cause of death in general population. According to the data taken from *European Hospital Morbidity Database* during the year 2006, the treatment of AMI (code I21 according to ICD-10) in the Republic of Croatia was a cause of 0.96% of all in-hospital admissions, while an average length of stay for AMI was 10.39 days. The data from the *European Detailed Mortality Database* (EDMD) for our country indicates that during the same year AMI caused 4.143 deaths, that is, this disease caused 8.22% of all deaths during the year 2006. Analyzing the data about the trend of percentage of deaths from AMI during the period from 1995 to 2006 in the Republic of Croatia there are only slight oscillations observed (from minimum 8.10% for the year 2003 to maximum 8.82% for the year 2001).

The data from the *National Registry of Myocardial Infarction* indicates that from the period between 1990 — 1993 and between 2003 — 2006, the number of patients with ST-segment elevation myocardial infarction (STEMI) was reduced from 64% to 34%. Although a slight increase in percentage of the patients over 75 years of age was registered (from 25% to 30%), no significant change at average age was registered. The share of women has not changed and amounts to approximately 35%. The data from the same registry for non-ST-segment elevation myocardial infarction (NSTEMI) indicates an increase of share from 26% to 66%, while the other data for elderly patients and women do not significantly differ from the previously mentioned ones. Since the interventional therapy shows a high benefit compared to conservative treatment, the data from the same registry for the USA shows that in the last 10 years a significant increase in the number of catheterizations, percutaneous coronary interventions (PCI) has occurred, and a number of cardiosurgical treatments has decreased.

The recently published analysis relating to the use of reperfusion treatment in patients with STEMI included in GRACE study during the period from 1999 to 2006 also in-



tijekom razdoblja od 1999. do 2006. god. također ukazuje na trend porasta učestalosti reperfuzijskog liječenja primjenom PCI u bolesnika sa STEMI, ali nas i opetovano podsjeća na činjenicu da još uvijek trećina svih bolesnika sa STEMI nije liječena reperfuzijskom terapijom.

Prosječna životna dob muškarca s AMI u Ujedinjenom Kraljevstvu, prema podacima iz *National Infarct Angioplasty Project* iznosi 61,5 godinu, a za žene 70,6 godina. Upravo ta razlika u dobi najvećim dijelom je uzrok više bolničke smrtnosti u žena, (5,6% za muškarce naspram 10,8% za žene) i prisutna je neovisno i primjeni fibrinolitike terapije ili primarne PCI.

U Republici Hrvatskoj je registrirana, prema podacima iz EDMD, visoka stopa dobnostandardizirane smrtnosti od AMI. Tako je naša zemlja na četvrtom mjestu po visini ove stope (iza Rumunjske, Malte i Mađarske). Ohrabruju podaci da postoji silazan trend ove stope od 2000. godine (90,8469/100.000 naspram 67,2753/100.000 stanovnika za 2006. god.). Detaljna analiza mortaliteta i morbiditeta od AMI u Hrvatskoj prikazana je u članku kolega iz *Hrvatskog zavoda za javno zdravstvo* u broju *Kardio lista* za prosinac 2008. godine.

Za smanjenje učinaka pobola i smrtnosti od akutne forme koronarne bolesti srca nije dovoljno poboljšati dijagnostiku i liječenje na svim razinama skrbi. Putem provedivog i primjenjivog nacionalnog programa potrebno je djelovati na razini čitave populacije naglašavajući značaj edukacije o pravilnoj prehrani i životnim navikama te važnost optimalne kontrole čimbenika rizika.

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indicates a trend of rise in frequency of reperfusion treatment by using PCI in patients with STEMI, but it again reminds us of the fact that still one third of all patients with STEMI has not been treated by reperfusion therapy.

An average age of men with AMI in the United Kingdom, according to the data from the *National Infarct Angioplasty Project* amounts to 61.5 years, and for women it amounts to 70.6 years of age. This difference in age largely causes more in-hospital mortality in women, (5.6% for men compared to 10.8% for women) and is present independent of use of fibrinolytic therapy or primary PCI.

It is registered in the Republic of Croatia, according to the data from EDMD, a high rate of age standardized mortality from AMI. So, our country takes the fourth place according to height of this rate (following Romania, Malta and Hungary). The encouraging information is that there is a falling trend of such a rate since the year 2000 (90.8469/100.000 compared to 67.2753/100.000 inhabitants for the year 2006). A detailed analysis of mortality and morbidity from AMI in Croatia is shown in the article by the colleagues from the *Croatian National Public Health Institute* in the edition *Kardio list* for December 2008.

As to reduce the effects of disease and mortality from the acute form of coronary heart disease, it is not sufficient to improve the diagnostics and treatment at all level of care. Through a feasible and applicable national program, it is necessary to act at the level of the overall population emphasizing the importance of education and training about proper nourishment and life habits and importance of optimum control of risk factors.