Trends in Croatian Primary Percutaneous Coronary Intervention Network

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Croatian Primary Percutaneous Coronary Intervention (pPCI) Network was introduced in the middle of 2005 in the Republic of Croatia. In total, 7,722 patients with acute ST-segment elevation myocardial infarction (STEMI) were treated with pPCI in Croatia by the end of 2012 (**Figure 1**). The number of pPCI centres as well as patients with acute STEMI treated with pPCI has been continuously rising during the investigated time. Since 2009, there were 11 centres that were included in the Croatian urgent PCI network thereby covering 75% of the population, only to be followed by the inclusion of the Dubrovnik center in early 2013 when the coverage for the population was even better. There were 5,934 PCI interventions in Croatia in 2012, of which 2,222 pPCI interventions for acute STEMI infarction within 12 hours, where the number of urgent interventions is by 10% higher than it was in 2011. As a result of delayed referral to hospitals, subject to the assessment of an individual interventional cardiologist, 504 STEMI infarctions were treated by intervention after 12 from the onset of pain, including 90 patients who were previously thrombolized. There is an increasing number of interventions within 72 hours in NSTEMI infarction and unstable angina pectoris. The ratio of urgent interventions for elective surgeries in Croatia is 70% to 30%.

The results of the Croatian pPCI Network, apart from being published in the prestigious American, European and Croatian cardiology journals, have been specifically highlighted by foreign experts at the 2011 EuroPCR Congress in Paris as an example of good organization and prioritising PCI for acute CAD in the country. The results are also evident through the statistical indicator of the Croatian National Institute of Public Health indicating that the mortality of cardiovascular disease in Croatia in the last five years, since the establishment of the network, has been reduced from 53% to 49% which is mainly the consequence of reduced mortality from acute myocardial infarction.¹⁻⁴

According to its actual results Croatian pPCI Network reaches plateau. Reasons for absence of additional improvement

are: higher risk profile of treated patients (higher frequency of older and female patients, cardiogenic shock, anterior myocardial wall and LM affected), inclusion of new, low-volume centres in network, longer symptom onset-to-door time, lower financial resources for cath-labs. The first two problems could be resolved by the development of pPCI Network, while the last two should be solved by the action directed to general population and Ministry of Health.

KEYWORDS: ST-segment elevation myocardial infarction, percutaneous coronary intervention, network, Croatia.

Figure 1. Results of Croatian Primary Percutaneous Coronary Intervention Network (number of ST-segment elevation myocardial infarction / year).

Received: 3rd Mar 2013

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Literature

1. Nikolić Heitzler V, Babić Z. Interventional treatment of acute myocardial infarction in Croatia; Kardio list. 2011;6(12):363-6.
2. Nikolić Heitzler V, Babić Z, Miličić D, et al. Primary percutaneous coronary intervention network in economically less developed country. Eur Heart J Suppl. 2010;12:F124
3. Nikolić Heitzler V, Babić Z, Miličić D, et al. Results of the Croatian Primary Percutaneous Coronary Intervention Network for patients with ST-segment elevation acute myocardial infarction. Am J Cardiol. 2010;105:1261-7.
4. Nikolić Heitzler V, Babić Z, Miličić D, et al. Evaluation of importance of door-to-balloon time and total ischemic time in acute myocardial infarction with ST-elevation treated with primary percutaneous coronary intervention. Acta Clin Croat. 2012;51:387-95.