Croatian Primary Percutaneous Coronary Intervention Network results (2005-2012)

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Internationally recognized Croatian Primary Percutaneous Coronary Intervention (PPCI) Network is the model that ensures equal and high results of ST-segment elevation acute myocardial infarction (STEMI) treatment in all parts of less economically developed country. In three periods of time (first phase 2005-2007, second phase 2008-2010, and third phase 2010-2011) 5,650 patients (pts.) with acute STEMI were treated with PPCI in 11 PCI centres in all parts of Croatia. Pts. were transferred from the surrounding counties or directly admitted to those centres. An annual number of pts. with acute STEMI treated with PPCI rise continuously during investigated time (581 vs. 1.272 vs. 1.949 pts./year). Pts. risk profile worsened during observed period: age (60.5 vs. 61.6 vs. 63.0 years; $p<0.01$), anterior myocardial wall involvement (42.6 vs. 44.4 vs. 50.7%; $p<0.01$), shock rate (6.7 vs. 8.8 vs. 10.7%; $p<0.05$), transferred pts. percentage (42.2 vs. 35.6 vs. 46.4%; $p<0.01$). Thanks to medical staff efforts average door-to-balloon time shortened (129.7 vs. 111.1 vs. 105.7 min.; $p<0.01$), but average pain-to-door time was prolonged (179.1 vs. 220.6 vs. 240.4 min.; $p<0.01$), fortunately without statistically significant influence on total ischemic time. Multivariate log-linear analysis, used for elimination of influence of higher risk profile on results of three phases, found no significant differences for postprocedural TIMI 3 flow or mortality rate (intrahospital or during follow-up), while the rate of angina pectoris and other major adverse cardiac events rise during follow-up ($p<0.01$). The lat-

ter could be explained with changes in strategy of PPCI during time (culprit lesion only) and higher availability of PCI centres for the additional PCI during follow-up after acute STEMI. During investigated time, the risk profile of treated pts. worsened and new low-volume PCI centers became part of the Croatian PPCI Network. However, high level network results found in the first phase remain mostly unchanged as a result of the network development.

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