

STRUCTURE OF THE HOSPITAL MORTALITY FROM ACUTE MYOCARDIAL INFARCTION

A. Penev, N. Penkov, V. Sirakova, Z. Zlateva

*Department of Cardiology and Rheumatology with Intensive
Care Unit, Varna*

The aim of the study was to analyse the structure of the in-hospital mortality from acute myocardial infarction (AMI) during the period between 1987-1990. A total of 1600 patients with AMI are investigated (1240 males and 360 females). Among 268 (81,3%) dead patients, an analysis of the structure of the mortality including 218 patients undergone autopsy has been made. The characteristics of the risk factors is taken into consideration.

The total in-hospital mortality during the period is 16,75%, significantly higher among females (29,16% vs 13,1%; $p < 0,002$). The mean age of the obducted males is lower than the age of the obducted females ($65,6 \pm 6$ vs $69,2 \pm 9$). During the fifth decade the part of the males is higher than that of the females ($p < 0,045$). During the eight decade the mortality among the females is significantly higher (60% vs 37,2%; $p < 0,02$). The most common reason for death is heart failure (HF) - congestive heart failure and cardiogenic shock (67,8%). The next reason for death is the rupture of the myocardium (RM), met in 38 (17,4%) from the patients; the females predominate (78,9%; $p < 0,02$), and half of them are diabetics. The embolic and the fatal arrhythmias have equal incidence among males and females ($p > 0,10$). A scar proving chronic myocardial infarction is found most commonly among patients died with HF (94%), secondly - among the group with embolic complications (37,9%), and at last - among patients with RM (7,9%). An analysis of the number of the dead patients has been made using as a point of view the time of the hospitalization: only 16% of the patients entered the hospital until the third hour, and 34,8% - until the sixth hour; the part of the hospitalized after the first 24 hours was 30,4%. The structure of mortality is listed below: till the 24th hour from the beginning of the AMI, 24,3% of patients with HF died; 26,5% of those with RM and 8,6% of the patients with embolism. Most of the patients died during the period from the 3rd till 7th day - 68% with RM and 54% with HF. The embolism, as a complication, has its peak about the 14th day. The mechanism of the death was proved by an ECG-recording in 213 (97,7%) of the dead patients: ventricular vibrillation - 22 (10,3%); asystolia - 53

(24,9%); electromechanical dissociation - 140 (65,8%).

During the last two decades, the morbidity from AMI obtained social significance and lots of money have been spent for prophylaxis and treatment. The morbidity from ischemic heart disease and AMI in many countries tends to become lower, as a result of the control of the risk factors. The prompt hospitalization and cares in an Intensive Coronary Care Unit made it possible to prevent the death due to fatal arrhythmias.

The practical realization of contemporary methods for treatment of AMI and those for restriction of the necrotic area made it possible to lower the incidence of cardiogenic shock. As a result the hospital mortality was lowered down to 12-18% (16,7%) and its structure was significantly changed. According to previous investigations, the total hospital mortality is 30% and the relative share of HF is 50%, that of the fatal arrhythmias is 40%, of the RM - 5% and of the embolism - 5%, too.

According to our present data, the most common reason for death is the HF followed by the RM. The incidence rate of the RM listed in our material is higher than the results obtained by other investigators - 6%. This is probably due to the lowered incidence rate of the fatal arrhythmias because of which in some of these patients the necrosis can be followed by a RM. The distribution of the dead patients according to the term of the lethal outcome and the structure of the mortality in our study did not differ from the data of other authors. As far as the mechanism of death has been discussed there is a difference in the incidence rate of the ventricular fibrillation which is the most common mechanism of death according to all investigators.

We could conclude that a reduction of the in-hospital mortality rate down to 16,7% is achieved. The relative incidence rate of the RM, HF and embolism is still too high. A further decrease of the hospital mortality may be realized by prompt hospitalization and adequate fibrinolytic and anticoagulant therapy.

References can be kindly requested from the authors.