PROFESSIONAL PAPER

Mortality at the Clinic of Internal Medicine of University Clinical Center in Tuzla During 2008

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1. INTRODUCTION

Natural death is the result of disease or health impairment which may be caused by natural internal or external factors that determine the pathological state resulting in death. Most accurate data on causes of death provide expert teams on the basis of pathological or forensic expertise. Accurate data can be obtained from doctors from clinical-hospital institutions if the deceased person was treated in such an institution and if it was previously diagnosed (hospital mortality).

Based on the data are being made the analysis of causes of death and usually are grouped into 10 most common causes which are then structurally analyzed. The most common causes of mortality are from cardiovascular and cerebrovascular diseases. International studies indicate a decline in mortality rates from coronary heart disease. Hospital mortality from this disease varies from 4-7% depending on the study (1,2,3). The presence of obesity, diabetes mellitus and vascular disease of non-cardiac origin increases hospital mortality (3,4).

Annual hospital mortality from acute myocardial infarction often exceeds 10% (4,5). Hospital mortality after cerebrovascular stroke in different studies varies from hospital to hospital and from country to country, and amounts to 8-56% (6,7,8).
Analysis of hospital mortality provides a lot of data that can be used in planning the hospital beds capacities, the amount of drug procurement, purchasing equipment, organization and creation of highly specialized medical teams (medical team for resuscitation), the number of reanimation techniques, the number of pathologists who are required for autopsy procedures, etc. Hospital mortality has not been analyzed at the Clinic for Internal Medicine in Tuzla.

2. GOAL

The goal was to determine the total number of deaths, the most common causes of death and the 10 leading diagnoses of deceased patients at the Clinic for Internal Medicine of Clinical Center in Tuzla during 2008.

3. MATERIAL AND METHODOLOGY

We used the material from the archive (medical records and reports on deceased patients, delivered by physicians working at the Clinic for Internal Medicine of Clinical Center in Tuzla). Data were statistically analyzed for all patients who died in 2008 at the Clinic for Internal Medicine.

4. RESULTS

During 2008 at the Clinic for Internal Medicine 368 patients died. At the intensive care unit died 164 (44.50%) patients, cardiology ward 14 (13.80%), department of nephrology 34 (9.24%), department of endocrinology 34 (9.24%), department gastroenterology 73 (19.84%), department of hematology 24 (6.52%), day hospital 2 (0.54%) and oncology department 1 (0.27%) patient. Analysis of the first diagnosis was made, which represents a states that can be practically considered the cause of death.

According to analyzed data most often diagnosed cause of death at the Clinic for Internal Medicine in 2008 in the total number of deaths (n=368) were:

- cardiogenic shock in 73 (19.84%) deaths,
- cerebrovascular stroke in 46 (12.50%) deaths,
- coma due to stroke in 32 (8.70%) deaths,
- coma that is not classified as cerebral in 25 (6.79%) deaths (metabolic 13 (3.53%) and hepatic 12 (3.26%)),
- cardiomyopathy in 22 (5.98%) deaths,
- malignant neoplasms of the abdomen in 17 (4.62%) deaths,
- respiratory insufficiency in 17 (4.62%) deaths,
- acute myocardial infarction and myocardial infarction with rupture in 17 (4.62%) deaths,
- pulmonary edema in 16 (4.35%) deaths,
- cardiorespiratory arrest in 13 (3.53%) deaths (Table 1).

Other diagnoses as causes of death listed by the number of occurrences:

- hemorrhagic shock in 11 (2.99%) deaths,
- leucosis in 9 (2.45%) deaths,
- sepsis in 8 (2.18%) deaths,
- pulmonary embolism in 8 (2.18%) deaths,
- sudden cardiac death in 7 (1.91%) deaths,
- multiple organ failure in 6 (1.64%) deaths,
- unknown cause of death (mors subito) 4 (1.10%) deaths,
- renal failure in 4 (1.10) death,
- esophageal varices in 3 (0.81%) deaths,
- hematemesis in 3 (0.81%) deaths,
• ventricular fibrillation in 2 (0.54%) deaths,
• endotoxic shock in 2 (0.54%) deaths,
• mega-ulcus of the stomach in 2 (0.54%) deaths,
• obstructive jaundice in 2 (0.54%) deaths,
• morbus Hodgkin in 2 (0.54%) deaths,
• diabetic ketoacidosis in 1 (0.27%) deaths,
• adenocarcinoma of the larynx in 1 (0.27%) deaths,
• valvular heart disease in 1 (0.27%) deaths,
• asystoly of the heart in 1 (0.27%) deaths,
• hypertensive and ischemic heart disease in 1 (0.27%) deaths,
• politrauma in 1 (0.27%) deaths,
• disseminated intravascular coagulation in 1 (0.27%) deaths,
• breast cancer in 1 (0.27%) deaths, cor pulmonale in 1 (0.27%) deaths,
• organic psychosis in 1 (0.27%) deaths,
• hepatorenal syndrome in 1 (0.27%) deaths,
• systemic sclerosis in 1 (0.27%) deaths,
• pancreatitis in 1 (0.27%) deaths,
• ovarian tumor in 1 (0.27%) deaths,
• peritonitis in 1 (0.27%) deaths,
• pleuropankreatitis in 1 (0.27%) deaths,
• lung cancer in 1 (0.27%) deaths, liver cirrhosis in 1 (0.27%) deaths,
• paraneoplastic syndrome in 1 (0.27%) deaths.

Sudden cardiac death occurs in 7 (1.91%) of primary diagnoses. According to the analysis of the most common causes of death by disease affected specific systems, the study results are shown in Figure 1 and Table 2. From the obtained results is obvious that the most common causes of death are due to cardiovascular disease (n=175; 47.55%) and at second place due to cerebrovascular disease (n=76; 20.65%) compared to the total number of deaths, which indicates that due to diseases of the cardiovascular and cerebrovascular systems died 251 (68.20%) patients.

The first diagnosis of the remaining 14 deceased patients could not be adequately classified into diseases that affect certain systems (sepsis, unknown cause of death (mors subito), endotoxic shock, etc.).

5. DISCUSSION AND CONCLUSIONS
Data from a doctor who did not know or has not cured the dead person were partially incorrect.

For accuracy of data in statistical analysis of the causes of death are only relevant data provided by the physician.

Place of death of the deceased could be anywhere. Accuracy of data grows in proportion with increasing number of deaths in health institutions. It should not happen that person’s death occurs in a hospital facility and not consult a physician who is thereby required to fill out a medical report on the cause of death. The structure of causes of death used to obtain information about the leading cause of death, whether the causes of death vary according to place of living, whether they are related to gender, age, whether are changing according to the type of occupation, religious beliefs, etc. Also they are used in calculating the specific rates by gender, age, marital status, occupation, social structure of the deceased, place of death, time of death, for calculation of life duration of residents of that territory, to obtain data on morbidity and changes in the presence of certain diseases during follow-up time (months, years) or follow-up depending on season, weather changes, economic development, early childhood diseases, cardiovascular diseases, frequency of causes of death and how much of the total mortality is included in this case, following the rate change by comparing the causes of death across time periods in this area, the differences in the structure of causes of death in the area if they are compared with other areas.

The structure of causes of death can also be used to calculate mortality from certain diseases (specific mortality).

International studies indicate the decline in mortality rates from coronary heart disease (myocardial infarction). Hospital mortality of this disease varies from 4-7% depending on the study to study as we get in our research (1,2,3). The presence of obesity, diabetes mellitus and vascular disease of non-cardiac origin increasing hospital mortality (3,4). Annual hospital mortality due to acute myocardial infarction often exceeds 10% (4,5).

Hospital mortality after cerebrovascular stroke in different studies varies almost from hospital to hospital and from state to state, which is 8-56% (6,7,8). At the Clinic of Internal Medicine, died a total of 368 patients in 2008. The largest number of deaths was in the intensive care ward (n=164; 44.50% of deaths).

Most common cause of death of patients at the Clinic for Internal Medicine of Clinical Center in Tuzla was cardiovascular diseases (n=175; 47.55%) of deaths, in second place were cerebrovascular diseases (n=76; 20.65%) of deaths for a total of 251 (68.20%) of deaths from cardiovascular and cerebrovascular disease. From acute myocardial infarction died (n=17) 4.62% of patients.

REFERENCES