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CAUSES OF DEATH IN DRUG ADDICTS BY MATERIALS OF DEPARTMENT OF FORENSIC MEDICINE AND DEONTOLOGY, UNIVERSITY HOSPITAL "ALEXANDROVSKA" – SOFIA

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ABSTRACT
A study on 224 cases of deaths with data of drug use was performed. The cases were subject of forensic medical examination at The Department of Forensic Medicine and Deontology – "Alexandrovska" University Hospital – Sofia for the period 2006-2010 in order to determine the causes of death.

Key words: drug poisoning; cause of death

INTRODUCTION

The prevalence of drugs and drug abuse in the recent years and the associated negative influence on society is a serious social problem worldwide. Drug addiction affects mostly young people of working age population. Significant percentage of them have first intake of drugs in their childhood [1]. The difference between types of drug packages, available on the black market and the presence of impurities with other substances in different qualitative and quantitative proportions lead to unpredictable effects like "overdose" and death [2, 3]. This fact is related with the relatively easy access to medicines such as benzodiazepines, barbiturates, hypnotics, etc. which are being added to the drug substance in order to increase the quality respectively greater profitability for the broadcaster. The increased frequency of death in drug addicts which died in different circumstances and were subject to forensic medical examination in Republic Bulgaria in the last few years motivated us to conduct a study of deceased with cause of death – drug poisoning on the territory of Sofia and Sofia region.

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MATERIALS AND METHODS

Conducted statistical study of forensic medical autopsies and related with them chemical studies of biological materials, committed in The Department of Forensic medicine and Deontology, "Alexandrovska University Hospital" during the period 2006-2010. For that period at The Department of Forensic medicine and Deontology, "Alexandrovska University Hospital" were performed 5594 forensic medical autopsies of which 224 were deceased with data (criminalistical, morphological and toxicological) of drug use.

RESULTS

In the statistical study conducted of 5594 autopsies and related toxicological studies of biological materials taken during the forensic medical examinations as blood, urine, stomach and small intestine with contents, liver, kidney, lung, brain, cerebrospinal fluid and aqueous humor is established that 224 cases referred to be with data of drugs abuse, who died in different circumstances and with different causes of death.

The analysis of the results points the following:

- in the year of 2006 there were 40 death cases of individuals with data of drug use.
- in the year of 2007 there were 43 death cases of individuals with data of drug use.
- in the year of 2008 there were 39 death cases of individuals with data of drug use.
- in the year of 2009 there were 48 death cases of individuals with data of drug use .
- in the year of 2010 there were 54 death cases of individuals with data of drug use.

The percentage of causes of death among them is presented in **Fig. 1**.

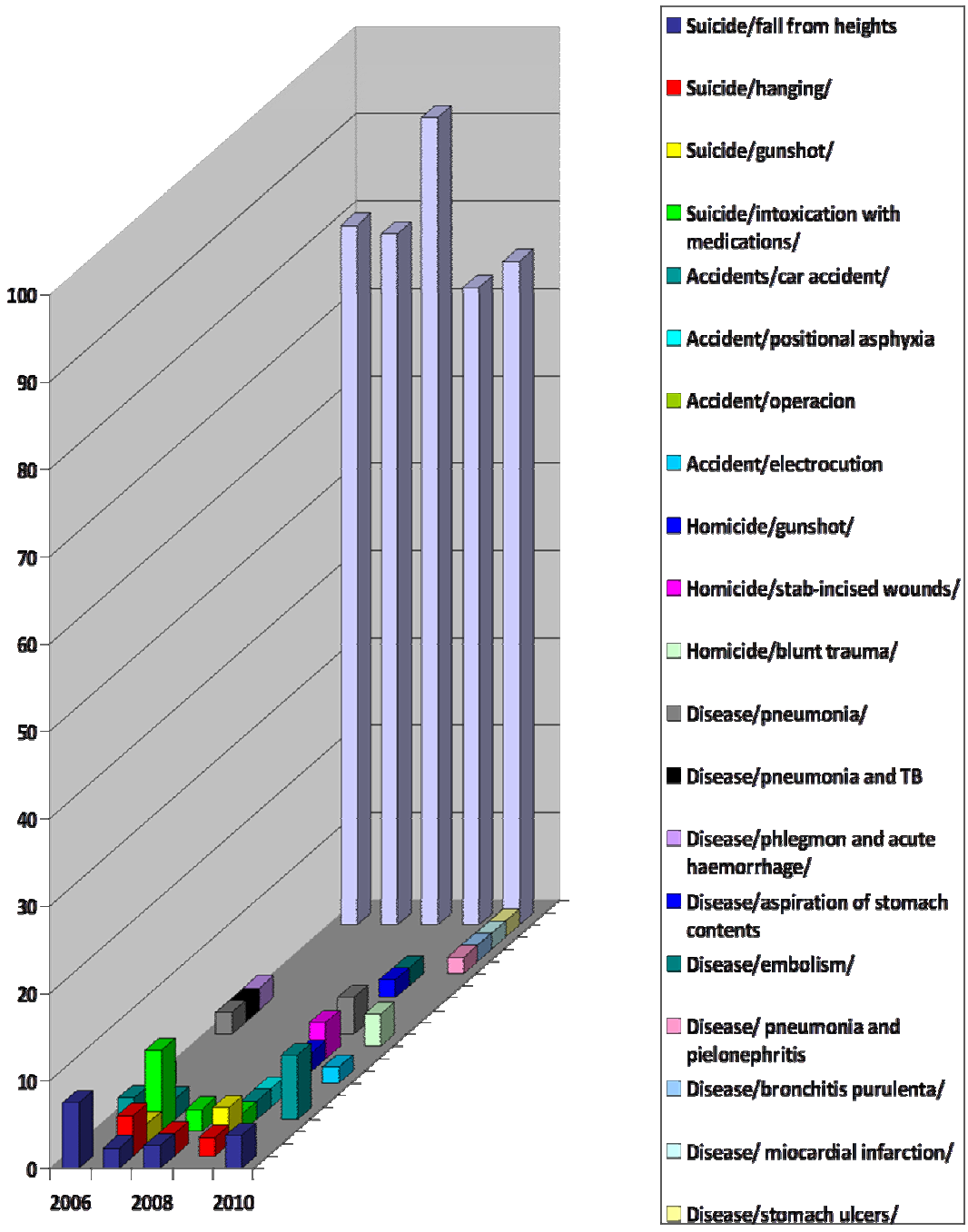

Fig. 1. The percentage of causes of death.

The generalized analysis shows that for the period 2006 to 2010 the percentage of death cases among individuals with data of drug use is as follows – **Fig. 2**.

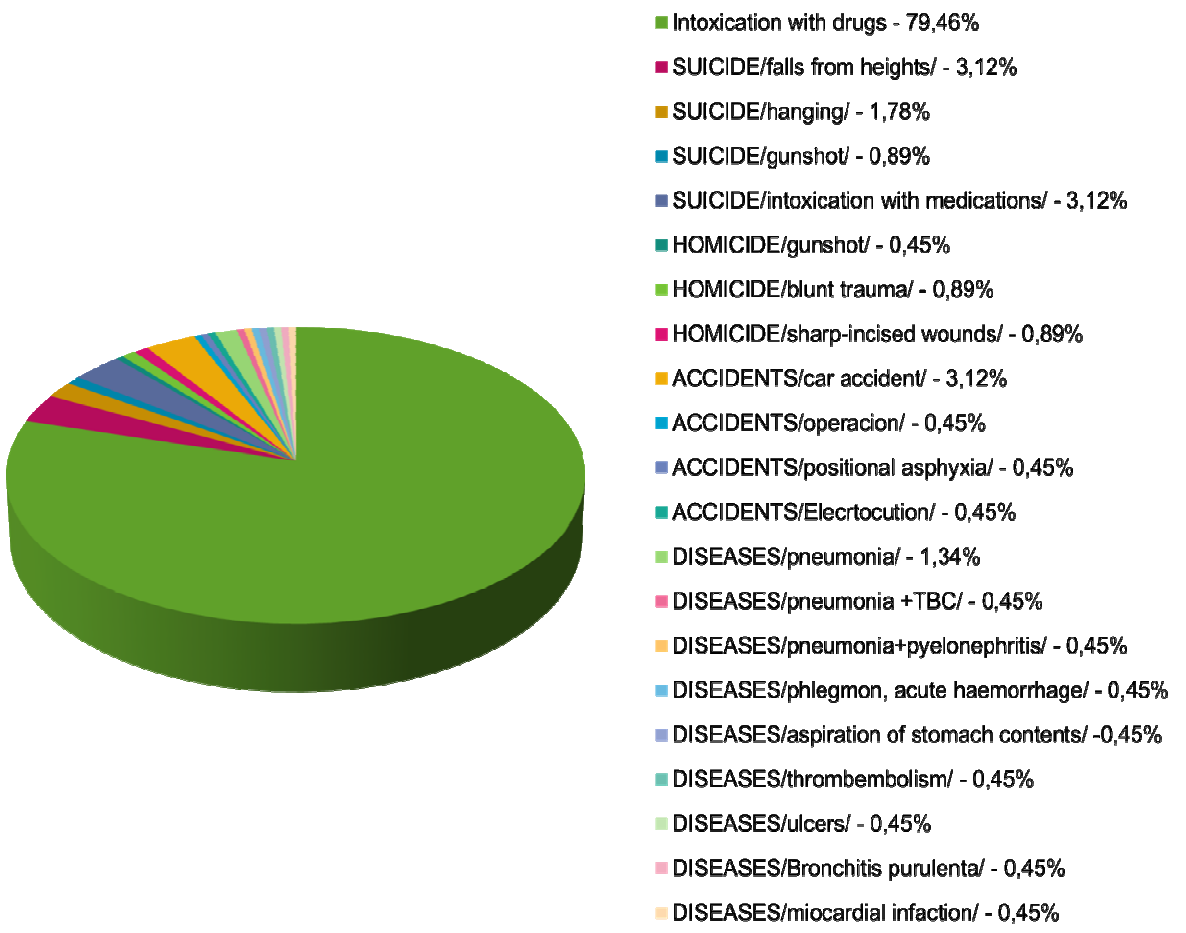

Fig. 2. Causes of death between the years 2006-2010.

DISCUSSION

The presented study reveals that for the period 2006-2010 the highest percentage (80.59%) of cases are with cause of death due to acute poisoning with drugs, mainly due to a dose of heroin. The next examined group is that with cases of suicides which are represented in 10.59% of the cases and 4.12% of them are cases with death due to poisoning with medicines of individuals with data of continuous drug use. In 2.94% of suicides the cause of death was due to falls from heights, in 2.35% of cases of suicide the cause of death was due to mechanical asphyxia by hanging. In only 1.18% of the individuals with data of chronically drug use suicides by gunshot of the head were committed. In 2.35% of the cases the cause of death is due to a developed pneumonia and in 0.59% of them was proved the existence of tuberculosis. In the remaining cases with pathological genesis with 0.59% are the following causes of death: pulmonary thromboembolism originating from blood vessels in the left hip area where there have been many signs of needle stitches and inflammation in blood vessels (case of long-term heroin user who was more than 10 years on methadone therapy); aspiration of thrown up substances with developed Mendelsohn syndrome, cachexia, hepatosplenomegaly (case of long term heroin use - more than 11 years without any drugs proved during the autopsy), acute hemorrhage due to cellulitis of the left thigh with fistula and erosion of the femoral artery. At the time of death in that case the deceased was affected by heroin impurities (spazmalgon) and ethyl alcohol. The fourth representative group is the group of accidents, which has occupied 2.94% of the cases we have examined. In 1.76% of them the cause of death is severe trauma due to a car accident committed by drivers affected by drugs combined or not with alcohol. In 1.17% of them is proved existence

of stimulants (amphetamines and THC) and only in 0.59% is proved existence of heroin and alcohol. The fifth group is the one of homicides – 1.77% of our cases, of which in 1.18% the cause of death is due to stab-incised injuries and acute hemorrhage. In only 0.59% of the cases the cause the death is due to gunshots.

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