

ACUTE POISONINGS WITH NEUROLEPTICS IN CLINIC OF TOXICOLOGY OF MILITARY MEDICAL ACADEMY VARNA/BULGARIA REGISTERED FOR 20 YEAR PERIOD

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ABSTRACT

PURPOSE: This retrospective study was conducted to follow out acute intoxications with neuroleptics in Varna region, to assess the frequency and proportion depending on other drug and non-pharmacological poisonings.

METHODS: The objects of the study are 193 patients with acute neuroleptic intoxications treated in the Clinic of toxicology of the Military Medical Academy – Varna, Bulgaria. The study is retrospective and covers a period of 20 years (1991-2010).

RESULTS: The incidence of acute poisonings with neuroleptics was 7.5% of all drug poisonings and 2.5% of general poisonings. Poisoning occurs more commonly in women and the majority of poisonings were in people of working age.

CONCLUSION: In recent years, there is a trend for an increase in the absolute number and the proportion of poisonings with neuroleptics. Lethality in these poisonings is not high – 0.4 percent.

Keywords: acute poisoning, intoxication, medicines, neuroleptics, antipsychotics

INTRODUCTION

Drug overdose is the most common cause of acute poisoning according to the data from Poison Control Centers throughout the world (1). In the USA, 25% of all routine hospital admissions and about 5% of all medical intensive care unit admissions involve some kind of drug-related adverse event (2). Poisoning is often referred to as the most

frequent method of suicide or suicide attempt, and most cases involve drug poisoning, particularly with psychotropic drugs such as benzodiazepines, antidepressants, and neuroleptics (3–5).

Neuroleptics, also known as antipsychotic agents and major tranquilizers, are primarily used to treat schizophrenia, manic phase of bipolar disorders, and agitated behavior. However, they are often used to treat nausea, vomiting, headache, and various neurological conditions (chorea, dystonia, spasms, tics, and torticollis). Besides accidental or intentional overdose, toxic effects often occur after ingestion of therapeutic doses. Toxic effects include anticholinergic and extrapyramidal syndromes as well as CNS and cardiovascular depression.

In this context, we aimed to investigate the acute intoxication with neuroleptics in Varna region for the period 1991-2010 year.

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MATERIALS AND METHODS

The objects of the study are 193 patients with acute neuroleptic intoxication treated in the Clinic of toxicology of Military Medical Academy – Varna, Bulgaria. The study is retrospective and covers a period of 20 years (1991-2010). The history of the disease, medical cards of the patients, who received treatment and medico-legal reports from autopsies of deceased patients were analyzed.

RESULTS AND DISCUSSION

During the period 1991-2010 the Clinic of Toxicology of the Military Medical Academy – Varna, Bulgaria treated 17 525 patients with acute intoxication and acute allergic reactions. Medicated poisonings were 5 926 (34.4%) (Tabl. 1).

Table 1. Total poisoning, total drug poisoning and neuroleptic poisoning during period of 1991-2010

Period	Total poisoning (%)	Total drug poisoning (%)	Neuroleptic poisoning (%)
1991-2010	17252 (100)	5926 (34,3)	445 (2,6)

There are substantial dynamics in the incidence of intoxication with drugs and etiological structure over the years in the period. There is a steady trend in reducing the absolute number of acute drug poisonings and their share in the causes of hospitalization in the Clinic of toxicology. These indicators are the highest in the first years of the period, when half of the hospitalized patients were with acute drug intoxications, and lowest at the end of the period. For the past five years (2006-2010) acute poisonings with drugs were the cause of hospitalization of 908 patients or 18.3% of all hospitalized, and in 2010 we have registered the lowest share of drug intoxication – 15% (Tabl. 2)

Table 2. Proportions of acute drug intoxications depending of the registered period

Period	Total drug poisoning
	5018
1991-2005	(29,1% of total poisoning and 85% of total drug poisoning)
	908
2006-2010	(5,3% of total poisoning and 15% of total drug poisoning)

Acute neuroleptic intoxications were registered in 445 patients. The frequency is not high – 7.5% of medicated poisonings and 2.5% of all hospitalized patients in the Clinic of Toxicology of Military Medical Academy – Varna, Bulgaria. In the structure of drug poisonings there was a trend to an increase in the share of neuroleptic intoxications. In the first 10 years of the period their share was nearly constant and fluctuating around 6%. During the last five years of the period their share rose to 15.75% (Fig. 1).

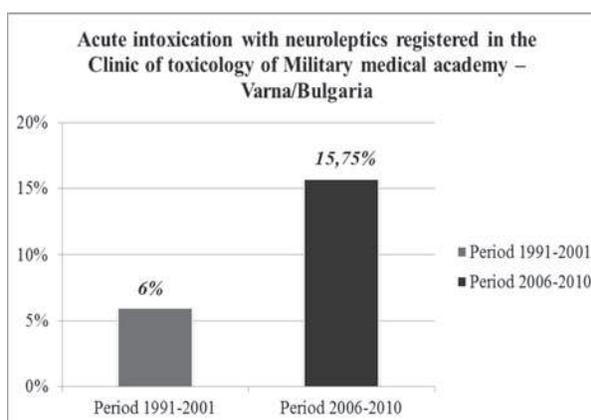


Fig. 1. Proportion of acute intoxication with neuroleptics medicated poisoning

The main reason for this increase is most likely due to the fact that the sale of neuroleptics was on plain white prescription forms in pharmacies, which made them easily accessible. As opposed to psychoactive drugs, such as benzodiazepines and barbiturates, which are prescribed on green forms, the population's access to these drugs is severely limited and the frequency of intoxication with them is very limited. This changes the etiological structure of drug intoxication and contributes to a significant increase in the proportion of poisonings with neuroleptics and a small increase in their absolute number.

The acute intoxications with neuroleptics are more common in women; the majority of poisonings are in people of working age. The main reasons for poisonings with neuroleptics were suicide attempts.

Fatal endings are registered only in two patients (0.4%). Lethality in poisoning with neuroleptics is significantly lower compared to the general mortality in acute exogenous intoxications, which is 1.3%, according to our data.

CONCLUSIONS

The incidence of acute poisonings with neuroleptics covers 7.5% of all drug poisonings. In recent years, there is a tendency for an increase in the absolute number and relative share. They are more common in women and in people of working age. The majority are the result of suicide attempts. Mortality in these poisonings is not high – 0.4 percent.

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