

ABSTRACT

Background

The annual drug overdose rates have been increasing exponentially since the 90's worldwide. Toxicological information centre (TIC) represents a valuable source of information for evaluating the trends in the drug poisonings in Czech Republic.

Aim of the study

The purpose was to analyze the number and trends in the calls concerning poisonings due to central nervous system (CNS) affecting drugs, identify the reasons of medication errors caused by laymen, frequency and consequences of these errors across all age groups and also to analyze the numbers, causes, symptoms and severity of the paracetamol intoxications.

Methods

During the reference period the data from the enquiries were extracted from the TIC electronic database, discharge reports from the hospital were studied or phone call follow-ups with the patients were carried out to be able to evaluate the outcome of the poisonings.

Results

In the years 1997-2002 the number of calls caused by poisoning with tricyclic antidepressants and barbiturates decreased (by 366.7 % and 340,0 %, respectively) whereas the calls due to selective serotonin reuptake inhibitors and benzodiazepines overdose increased (by 1347.4 % and 359.8 %). The 0-5 years old children are at the highest risk of experiencing medication errors or accidental poisonings (46,0 %). There is a conservative approach in the Czech Republic with regard to the treatment of the paracetamol intoxications and the antidote is administered even in cases where it is not necessary.

Conclusions

The results show for the first time the current trends in the CNS affecting drugs in Czech Republic, describe the causes of the medication errors in laymen, imply preventive measures to avoid these errors and demonstrate the challenges in paracetamol intoxications and need for use of the antidote only when indicated (120-150 mg/l plasma paracetamol).

Key words

Drug overdose, medication errors, prevention, accidental poisonings, paracetamol.