

# HUMAN EXPOSURES TO VETERINARY MEDICINES REPORTED TO THE POISONS INFORMATION CENTRE ERFURT FROM 2003-2012

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## Objective

The aim of the study was to get recent information on important characteristics of all human exposures to veterinary medicines (HEVM) reported to the poisons Information Centre (PIC) Erfurt over a ten year period.

## Methods

In a retrospective study we analysed the development of frequencies, circumstances of exposure, symptom severity (classification into no or minor, moderate, severe according to the poisoning severity score), age groups (C: < 14 years; CB: < 1 year; CT: 1 to 5 years; CS: 6 to 13 years; CA: 14 to 17 years; A: > 17 years; AM: 18 to 65 years; AE: > 65 years), and substances involved in all HEVM-related inquiries to the PIC Erfurt from the beginning of 2003 to the end of 2012.

The relative frequencies of age groups, and circumstances of exposures were compared and analysed according to the chi-quadrat-test for significant differences ( $p < 0.05$ ) between HEVM and all human exposures.

## Results

In total, 389 cases of HEVM with 409 veterinary medicines were registered. In 360 cases, only one veterinary medicine was involved. Although cases of HEVM increased almost 1.4-fold from 28 in 2003 to 38 in 2012 their percentage of all cases of exposures remained almost constant 0.30% (0.28-0.35%) over the same period (Fig. 1).

Age groups involved in HEVM were more often children 52.4% (toddlers 43.4%) and less frequent adults 46.0% than in all exposures (children: 48.7% (toddlers 34.2%); adults 48.7%) (Fig. 2).

The portion of accidental exposures was higher in HEVM (83.3%) than in all exposures (59.3%), whereas the portion of suicidal exposures was lower (HEVM: 6.4%, all exposures: 23.6%).

Most frequent veterinary medicines (ATCvet) in HEVM were antiparasitic products, insecticides and repellents (QP) (183), products for the nervous system (QN) (48), products for the cardiovascular system (QC) (35), and immunologicals (QI) (35).

HEVM mostly resulted in no or mild symptoms (83.8%) and rarely in moderate (10/389, 2.6%) or even severe symptoms (5/389, 1.3%) (Fig. 3). In 4 of 5 cases of HEVM with severe symptoms, veterinary surgeons used products for animal euthanasia (3) or methadone (1). Once, self medication with anthelmintics for several days by a goatherd resulted in transient blindness.

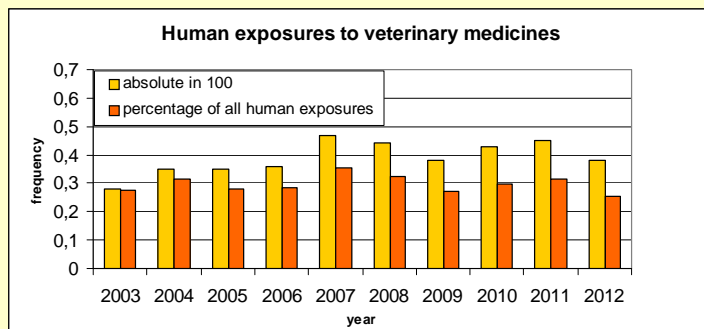


Fig. 1 Frequency of human exposures to veterinary medicines (in 100) and their percentage of all human exposures (in %) reported to the PIC Erfurt from the beginning of 2003 to the end of 2012.

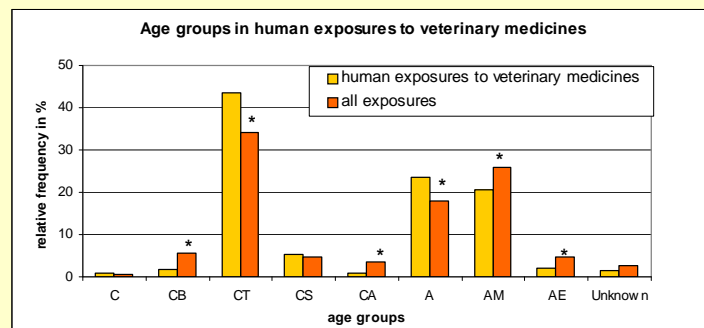


Fig. 2 Age groups in human exposures to veterinary medicines and in all human exposures (in %) reported to the PIC Erfurt from the beginning of 2003 to the end of 2012. Significant differences between human exposures to veterinary medicines and all human exposures are signed by \*.

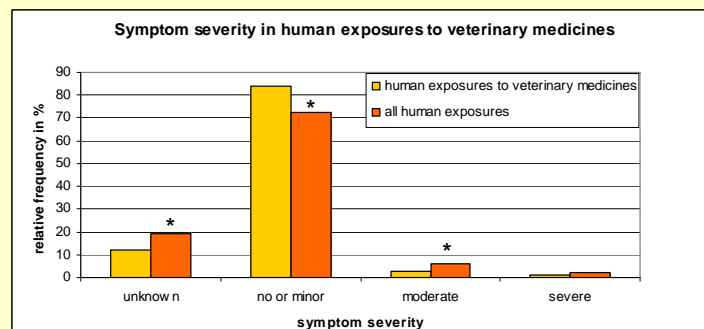


Fig. 3 Symptom severity in human exposures to veterinary medicines and in all human exposures (in %) reported to the PIC Erfurt from the beginning of 2003 to the end of 2012. Significant differences between human exposures to veterinary medicines and all human exposures are signed by \*.

## Conclusions

- In comparison to other human exposures, HEVM are rare.
- Most accidental HEVM in laymen result only in no or mild symptoms
- If veterinary surgeons, however, swallow or inject products for animal euthanasia or opioids in suicidal intention, severe symptoms can be expected.