Objective
Flukiver Combi® (closantel 50 mg/mL and mebendazole 75 mg/mL) is a veterinary drug used as anthelmintic for cattle, sheep, and goats. The recommended treatment is a single dose of 1 mL/5 kg (closantel 10 mg/kg and mebendazole 15 mg/kg). Mebendazole is used in human medicine too, but the salicylanilide-derived component closantel is only used in veterinary medicine (1).

Case Report

Patient: 59-year-old man

Route of exposure and dose:
The patient ingested 4 mL Fluciver Combi® three times daily for 3 days on purpose to cure himself.

Total dose of 36 mL results in closantel 30 mg/kg and mebendazole 45 mg/kg.

Time of admission:
approximately 4 days after last dose

Clinical features:
➢ Initial symptoms: scotomata not otherwise specified
➢ Eye examination at time of admission:
  Visual acuity 0,3 (right)
              0,4 (left)
  Ocular tension 19 mmHg (right)
               18 mmHg (left)
               (normal 10 - 21 mmHg)

Front section and fundus inconspicuous on both sides

Static perimetry:
  ● Scotomata in the total 30° visual field
  ● Mean visual field defect: 8,8 dB (right)
    11,0 dB (left)

Visually evoked cortical potentials:
  ● VEP could not be recorded reproducibly
Other laboratory findings were inconspicuous.

Treatment and course:
  ● Glucocorticoids inefficient;
  ● Total blindness 10 days after last dose;
  ● Plasmaphresis;
     analysis of plasma samples is in process;
  ● Recovery of visual acuity to 0,6 was reported six weeks after last dose.

Animal Pharmacokinetic Data of Closantel

Absorption
● Oral bioavailability in sheep and cattle 50 % (1)
● Maximum plasma levels 24 to 48 hours after p.o. or i.m. application (1)

Distribution
● Plasma protein binding 99 % (1)

Metabolism
● Biotransformation to 3- and 5-moniodoclosantel isomers
  (only 2 % of the dose) (1)

Elimination
● Biliary excretion mainly unchanged (80 % of the dose) (1)
● Half-life in sheep and cattle 16 to 23 days (1)

Animal Toxicity of Closantel

Conclusions
➢ This case confirms the report of ‘t Hoen and Hodgkin (2) that closantel causes reversible blindness in humans. Obviously, humans are more sensitive to this toxic effect than animals.
➢ The long-lasting effect correlates with the slow elimination of the unchanged drug.
➢ Furthermore, the case indicates the remarkable risk of self-treatment with drugs unapproved for human use.

Literature