VERMINTHEL D® Tablet (abamectine, praziquantel)

COMPOSITION

<table>
<thead>
<tr>
<th>Content</th>
<th>Verbinthel D® Tablet</th>
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<tbody>
<tr>
<td>Abamectine</td>
<td>2 mg</td>
</tr>
<tr>
<td>Praziquantel</td>
<td>50 mg</td>
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<tr>
<td>Excipients</td>
<td>Each tablet</td>
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</tbody>
</table>

The product contains: lactose, starch, sucrose, sodium lauryl sulphate, ascorbic acid, microcrystalline cellulose, talc, magnesium stearate, colloidal silica gel.

PHARMACOLOGICAL ACTION

The product contains the active ingredients abamectin and praziquantel. Abamectin belongs to the group of avermectines, chemotherapeutica which are structurally related to macrolide antibiotics. They do not have a specific action against bacteria or fungi. Abamectin is very lipophylic and therefore almost insoluble in water. Avermectines interfere with the neurotransmitters glutaminic acid and gamma-amino butiric acid (GABA) causing disturbances in the neurotransmission (opening of the chloride-ion channels). This causes paralysis and finally the death of the sensitive parasites. In mammals there is only a small fraction passing the blood-brain barrier (basis of selective toxicity). Abamectin is active against gastro-intestinal worms, lungworms and ectoparasites (including Blood sucking lice, ticks and mites). Resistance has been demonstrated in some nematodes (including Haemonchus contortus, Ostertagia circumcinta and Trichostrongylus colubriformis). Resistance in sensitive ectoparasites is not known.

Praziquantel is an almost insoluble isocholine-derivate. Praziquantel interacts with the legument of the cestodes causing disturbance of the calcium-ion permeability. This causes contractions of the somatic muscles and a disturbance of the metabolism. Praziquantel has cesticidal activity against tape worms and against the larval stages in the tissues. There is also proven efficacy against trematodes. There is no proven resistance.

Due to its poor solubility in water resorption of abamectin from the gastro-intestinal tract is slow. The distribution volume of avermectines is big but they hardly penetrate to the brains. Relatively high concentrations are achieved in fat, liver and gal bladder (almost 100% of the dose is excreted through the faeces), bone marrow, kidneys, pancreas and lungs. Abamectin is metabolised in the liver. The elimination-half time is 118 ± 22 hour. After oral administration, there is a quick resorption of praziquantel from the duodenum giving maximal serum levels after circa 1 hour. The elimination-half time in dogs is circa 3 hours. Praziquantel penetrates into the tissues (including the central nerve system). There is metabolism in the liver and 60-80% of the administered dose is excreted as metabolites via the urine. There is also excretion via the gal and enteric juice.

INDICATIONS

For the treatment of mixed infections of nematodes (Toxocara canis, Toxascaris leonina) adult stages of Ancylostoma caninum, Uncinaria stenocephala and/or Trichuris vulpis and cestodes (Dipylidium caninum and/or Echinococcus granulosus and/or Taenia hydatigena).
CONTRAINDICATIONS
Do not use in collies, bobtails or shelties. Do not administer to dogs under 2.5 kg. Do not administer more than 4 tablets to dogs over 40 kg. The safety of the product has not been investigated in pregnant or lactating dogs. The use of the product in such animals is not recommended.

MODE OF ADMINISTRATION
Orally, for administration to dogs.

TARGET SPECIES
Dogs.

DOSAGE
The single dose is 0.2 mg abamectin and 5 mg praziquantel per kg bodyweight (= 1 tablet per 10 kg bodyweight).

SIDE EFFECTS
Praziquantel has a wide therapeutic index (40-90). In case of overdosing adverse reactions as apathy, anorexia, mydriasis, ataxia, tremors and salivation may be seen. Avermectins can give side reactions. There are cases described in the literature of death in Collies or Collie-like dogs (including Shetland Sheepdogs, Border Collies, Bobtails and Shelties).

WITHDRAWAL PERIOD
Not applicable.

STORAGE
Do not store above 25°C. Keep in the original pack. Do not refrigerate or freeze.

PACKING
PVC/PVDC/aluminium blister with 2 tablets. Carton outer box with 2 blisters. Carton outer box with 50 blisters.

WARNING
Do not administer simultaneously with product having the same mode of action.