SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Zitac vet 200 mg tablets for dogs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Active substance: cimetidine 200 mg per tablet.
For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Tablet.
Oblong tablets, scored on both sides

4. CLINICAL PARTICULARS

4.1 Target species

Dogs

4.2 Indications for use, specifying the target species

Symptomatic treatment for the reduction of vomiting associated with chronic gastritis in dogs.

4.3 Contraindications

None

4.4 Special warnings for each target species

Treatment with cimetidine is symptomatic only and does not result in resolution of histopathological changes associated with gastritis. It is recommended that dogs showing persistent vomiting should undergo appropriate investigations to diagnose the underlying cause before starting treatment. This is especially important in older animals. The reduction of gastric acidity caused by cimetidine may contribute to bacterial overgrowth and antigenic stimulation.

4.5 Special precautions for use

i) Special precautions for use in animals
In case of renal dysfunction, adjustment of the dose may be required as the clearance of cimetidine may be decreased. If the response to treatment is poor within 15 days, the diagnosis and treatment plan should be re-evaluated.

ii) Special precautions to be taken by the person administering the medicinal product to animals
None.

4.6 Adverse reactions (frequency and seriousness)

Transient and self-resolving slight swelling of mammary glands may be observed in female dogs (gynaecomastia; anti-androgenic activity). A reduction of prostate weight was also observed in male rats and dogs, with no impact on reproductive performances; this effect was reversible. No other undesirable effects were reported.

4.7 Use during pregnancy, lactation or lay

The use of the product during pregnancy and lactation in the target species has not been investigated. Therefore, use of the veterinary medicinal product during pregnancy and lactation should be based on a risk benefit-assessment by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

Due to inhibition of cytochrome P-450 activity by cimetidine, the metabolism and elimination of some drugs can be reduced. Clinically relevant interactions may occur with compounds having a narrow therapeutic index, *e.g.* beta-blockers, calcium channel blockers, benzodiazepines, barbiturates, phenytoin, theophylline, aminophylline, warfarin and lidocaine. Doses of such drugs may need to be reduced when administered concomitantly with cimetidine.
The increased gastric pH resulting from cimetidine administration may lead to reduced absorption of drugs requiring an acid medium for absorption. It is recommended that at least 2 hours should elapse between administration of cimetidine and aluminium or magnesium hydroxide, metoclopramide, digoxin or ketoconazole when possible."

4.9 Amount(s) to be administered and administration route

Dose and route of administration: 5 mg of cimetidine per kg of bodyweight administered three times daily by the oral route (see indicative table below). The concomitant use of appropriate dietary measures is strongly recommended. In clinical trials the efficacy of cimetidine has only been studied concomitantly with a hypoallergenic diet.

Table: Number of Zitac vet 200 mg tablets to be administered three times daily according to body weight.

Weight (kg)	Number of Zitac vet 200 mg tablets
11 to 20	½
21 to 40	1
41 to 60	1 ½

Recommended treatment scheme: reduction of vomiting is achieved in about 2 weeks. Animals should however be treated for at least 2 weeks after the remission of clinical signs, so a minimum treatment duration of 28 days is usually necessary and therefore recommended. If considered successful, medication should be withdrawn for 2 weeks. If vomiting occurs again, treatment can be re-initiated without risk of intolerance.
Depending on the response, treatment can be adapted to the individual animal until the response is considered to be adequate and continued. Dietary measures should always be maintained.

4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary

Acute exposure to cimetidine yielded LD_{50} values above 2600 mg/kg, *i.e.* over 170 times the recommended daily dosage in dogs. A target animal safety study in dogs demonstrated that the product administered orally at 75 mg cimetidine/kg/day (five times the recommended daily dose) for a period of 91 days was well tolerated by dogs.

No signs of overdose are known.

4.11 Withdrawal period

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Active ingredient: cimetidine.
Pharmacotherapeutic group: H_2-receptor antagonists,
ATCvet code: QA02BA01.

5.1 Pharmacodynamic properties

Cimetidine is an antagonist of the histamine H_2-receptors present in the gastric parietal cells. Stimulation of H_2-receptors by histamine activates gastric acid secretion. Cimetidine, via its antagonistic properties toward histamine H_2-receptors, strongly reduces gastric acid secretion. This may result in the

diminution of gastric irritation and subsequent vomiting during chronic gastritis. No accompanying improvement in the inflammatory status of the gastric mucosa was observed in dogs.

5.2 Pharmacokinetic particulars

After oral administration of the product at a dose rate of 5 mg/kg body weight to fasted dogs, maximal plasma levels of approximately 2 µg/ml are reached after 1.5 hours post-administration. Bioavailability is about 95%. The extent of absorption of cimetidine in dogs is delayed and reduced by approximately 40 % in the presence of food ($C_{max\ fasted}$ 2.94 mcg/ml, $C_{max\ fed}$ 1.12 mcg/ml, $AUC_{0-\infty\ fasted}$ 8.23 mcg.h/ml and $AUC_{0-\infty\ fed}$ 5.43 mcg.h/ml). However, this does not affect the efficacy of treatment

The plasma half-life of cimetidine is approximately 2 hours at a dosage of 5 mg/kg. Cimetidine is rapidly and almost completely excreted into the urine. No drug accumulation occurs after repeated oral treatment at 5 mg/kg three times daily over 30 consecutive days.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

- Lactose monohydrate
- Microcrystalline cellulose
- Maize starch pregelatinised
- Sodium starch glycolate type A
- Magnesium stearate

6.2 Incompatibilities

Not applicable

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 3 years

6.4 Special precautions for storage

Store the blisters in the original package to protect from light. Remaining tablet halves should be stored in the original blister pocket in order to protect from light.

6.5 Nature and composition of immediate packaging

The tablets are packed in push-through blisters (white opaque PVC/Aluminium foil) in an outer printed carton box.

Authorised pack sizes:
Carton box containing 30 tablets (3 blister with 10 tablets per blister)
Carton box containing 100 tablets (10 blister with 10 tablets per blister)

Not all pack sizes may be marketed

6.6 Special precautions for the disposal of unused veterinary medicinal product or waste materials, derived from the use of such products, if appropriate

Any unused veterinary medicinal product or waste materials derived from such veterinary medicinal products should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

MSD Animal Health UK Limited
Walton Manor
Walton
Milton Keynes
Buckinghamshire
MK7 7AJ

8. MARKETING AUTHORISATION NUMBER

Vm 01708/4639

9. DATE OF FIRST AUTHORISATION

22 February 2007

10. DATE OF REVISION OF THE TEXT

17 July 2020

Approved 17 July 2020