

## **SUMMARY OF PRODUCT CHARACTERISTICS**

### **1. NAME OF THE VETERINARY MEDICINAL PRODUCT**

MiPet Benazapet 20 mg Tablets for Dogs

### **2. QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each tablet contains:

Active substance Benazepril hydrochloride 20 mg

For the full list of excipients, see section 6.1.

### **3. PHARMACEUTICAL FORM**

Tablet.

Beige to light brown, ovaloid, divisible, tablet scored on both sides.

The tablets can be divided into halves.

### **4. CLINICAL PARTICULARS**

#### **4.1 Target species**

Dogs.

#### **4.2 Indications for use, specifying the target species**

Dogs:

Treatment of congestive heart failure.

#### **4.3 Contraindications**

Do not use in cases of cardiac output failure due to aortic or pulmonary stenosis.  
Do not use in case of hypersensitivity to the active substance or to any of the excipients.

Do not use in cases of hypotension, hypovolaemia, hyponatraemia or acute renal failure.

Do not use in pregnancy or lactation (section 4.7).

#### **4.4 Special warnings for each target species**

None.

#### **4.5 Special precautions for use**

i. Special precautions for use in animals

The efficacy and safety of MiPet Benazapet has not been established in dogs below 2.5 kg body weight.

No evidence of renal toxicity to benazepril hydrochloride has been observed in dogs during clinical trials; however, as is routine in cases of chronic kidney disease, it is recommended to monitor plasma creatinine, urea and erythrocyte counts during therapy.

ii. Special precautions to be taken by the person administering the veterinary medicinal product to animals

Wash hands after use.

In case of accidental oral ingestion, seek medical advice immediately and show the label or the package leaflet to the physician. Pregnant women should take special care to avoid accidental oral exposure because angiotensin converting enzyme (ACE) inhibitors have been found to affect the unborn child during pregnancy in humans.

#### **4.6 Adverse reactions (frequency and seriousness)**

In double-blind clinical trials in dogs with congestive heart failure, benazepril hydrochloride was well tolerated with an incidence of adverse reactions lower than observed in placebo-treated dogs. A small number of dogs may exhibit transient vomiting, incoordination or signs of fatigue. On rare occasions diarrhoea and anorexia have been reported in dogs.

In dogs with chronic kidney disease, MiPet Benazapet may increase plasma creatinine concentrations at the start of therapy. A moderate increase in plasma creatinine concentrations following administration of ACE inhibitors is compatible with the reduction in glomerular hypertension induced by these agents, and is therefore not necessarily a reason to stop therapy in the absence of other signs.

The frequency of adverse reactions is defined using the following convention:

- very common (more than 1 in 10 animals treated displaying adverse reaction(s))
- common (more than 1 but less than 10 animals in 100 animals treated)
- uncommon (more than 1 but less than 10 animals in 1,000 animals treated)
- rare (more than 1 but less than 10 animals in 10,000 animals treated)

- very rare (less than 1 animal in 10,000 animals treated, including isolated reports).

#### 4.7 Use during pregnancy, lactation or lay

The safety of benazepril hydrochloride has not been established in breeding, pregnant or lactating dogs.

##### Pregnancy

Do not use during pregnancy or lactation.

Laboratory studies in rats have shown evidence of embryotoxic effects (foetal urinary tract malformation) at maternally non-toxic doses.

#### 4.8 Interaction with other medicinal products and other forms of interaction

In dogs with congestive heart failure, benazepril hydrochloride tablets have been given in combination with digoxin, diuretics, pimobendan and anti-arrhythmic veterinary medicinal products without demonstrable adverse interactions. In humans, the combination of ACE inhibitors and Non-Steroidal Anti-Inflammatory Drugs (NSAIDs) can lead to reduced anti-hypertensive efficacy or impaired renal function. The combination of benazepril hydrochloride and other anti-hypertensive agents (e.g. calcium channel blockers,  $\beta$ -blockers or diuretics), anaesthetics or sedatives may lead to additive hypotensive effects. Therefore, concurrent use of NSAIDs or other medications with a hypotensive effect should be considered with care. Renal function and signs of hypotension (lethargy, weakness etc.) should be monitored closely and treated as necessary.

Interactions with potassium-preserving diuretics like spironolactone, triamterene or amiloride cannot be ruled out. It is recommended to monitor plasma potassium levels when using benazepril in combination with a potassium-sparing diuretic because of the risk of hyperkalaemia.

#### 4.9 Amounts to be administered and administration route

MiPet Benazapet tablets should be given orally once daily, with or without food. The duration of treatment is unlimited.

MiPet Benazapet 20 mg tablets are flavoured and are taken voluntarily by most dogs.

MiPet Benazapet should be administered orally at a minimum dose of 0.25 mg (range 0.25-0.5) benazepril hydrochloride/kg body weight once daily, according to the following table:

Weight of dog (kg)	MiPet Benazapet 20 mg tablets	
	Standard dose	Double dose
>20-40	0.5 tablet	1 tablet
>40-80	1 tablet	2 tablets

The dose may be doubled, still administered once daily, to a minimum dose of 0.5mg/kg (range 0.5-1.0), if judged clinically necessary and advised by the veterinary surgeon.

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

MiPet Benazapet 20 mg tablets reduced erythrocyte counts in normal dogs when dosed at 150 mg/kg body weight once daily for 12 months, but this effect was not observed at the recommended dose during clinical trials in dogs.

Transient reversible hypotension may occur in cases of accidental overdose. Therapy should consist of intravenous infusion of warm, isotonic saline.

#### **4.11 Withdrawal period(s)**

Not applicable.

### **5. PHARMACOLOGICAL PROPERTIES**

Pharmacotherapeutic group: ACE Inhibitors, plain.  
ATCvet code: QC09AA07

#### **5.1 Pharmacodynamic properties**

Benazepril hydrochloride is a pro-drug, hydrolysed in vivo to its active metabolite, benazeprilat. Benazeprilat is a highly potent and selective inhibitor of ACE, thus preventing the conversion of inactive angiotensin I to active angiotensin II and thereby also reducing synthesis of aldosterone. Therefore, it blocks effects mediated by angiotensin II and aldosterone, including vasoconstriction of both arteries and veins, retention of sodium and water by the kidney and remodelling effects (including pathological cardiac hypertrophy and degenerative renal changes).

MiPet Benazapet causes long-lasting inhibition of plasma ACE activity, with more than 95% inhibition at peak effect and significant activity (>80% in dogs) persisting 24 hours after dosing. MiPet Benazapet reduces the blood pressure and volume load on the heart in dogs with congestive heart failure.

#### **5.2 Pharmacokinetic particulars**

After oral administration of benazepril hydrochloride, peak levels of benazepril are attained rapidly ( $t_{max}$  0.5 h in dogs) and decline quickly as the active substance is partially metabolised by liver enzymes to benazeprilat. The systemic bioavailability is incomplete in dogs (~13%) due to incomplete absorption (38% in dogs) and first pass metabolism. In dogs, peak benazeprilat concentrations ( $C_{max}$  of 37.6 ng/ml after a dose of 0.5 mg/kg benazepril hydrochloride) are achieved with a  $T_{max}$  of 1.25 hours.

Benazeprilat concentrations decline biphasically: the initial fast phase ( $t_{1/2}=1.7$  hours in dogs) represents elimination of free drug, while the terminal phase ( $t_{1/2}=19$  hours in dogs) reflects the release of benazeprilat that was bound to ACE, mainly in the tissues. Benazepril and benazeprilat are extensively bound to plasma proteins (85-90 %), and in tissues are found mainly in the liver and kidney.

There is no significant difference in the pharmacokinetics of benazeprilat when benazepril hydrochloride is administered to fed or fasted dogs. Repeated administration of MiPet Benazapet leads to slight bioaccumulation of benazeprilat ( $R=1.47$  in dogs with 0.5 mg/kg), steady state being achieved within a few days (4 days in dogs).

Benazeprilat is excreted 54% via the biliary and 46% via the urinary route in dogs. The clearance of benazeprilat is not affected in dogs with impaired renal function and therefore, no adjustment of the dose of MiPet Benazapet is required in cases of renal insufficiency.

## **6. PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Cellulose microcrystalline  
Crospovidone  
Povidone  
Basic butylated methacrylate copolymer  
Silicon dioxide anhydrous  
Sodium laurilsulfate  
Dibutyl sebacate  
Silica colloidal anhydrous  
Stearic acid  
Yeast powder  
Artificial powdered beef flavour

### **6.2 Major incompatibilities**

Not applicable.

### **6.3 Shelf life**

Shelf life of veterinary medicinal product as packaged for sale: 3 years  
Shelf life of tablet halves: 2 days

### **6.4 Special precautions for storage**

This veterinary medicinal product does not require any special storage conditions.  
Return half tablet to blister pocket and store in original carton, use at next administration.

**6.5 Nature and composition of immediate packaging**

14 tablets per aluminium/aluminium blister strip. Cardboard box with:

- 2 blisters (28 tablets)

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

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

**7. MARKETING AUTHORISATION HOLDER**

Elanco Europe Ltd.  
Form 2, Bartley Way  
Bartley Wood Business Park  
Hook  
RG27 9XA  
United Kingdom

**8. MARKETING AUTHORISATION NUMBER**

Vm 00879/4001

**9. DATE OF FIRST AUTHORISATION**

15 October 2015

**10. DATE OF REVISION OF THE TEXT**

June 2024

*Gavin Hall*

Approved: 12 June 2024