

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Vetmedin 1.5 mg/ml oral solution for dogs

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

One ml contains:

Active substance:

Pimobendan 1.5 mg/ml

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Oral solution.

Clear, colourless to yellow to slightly green to slightly brown solution.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs

4.2 Indications for use, specifying the target species

For the treatment of canine congestive heart failure originating from dilated cardiomyopathy or valvular insufficiency (mitral and/or tricuspid valve regurgitation).

For the treatment of dilated cardiomyopathy in the preclinical stage (asymptomatic with an increase in left ventricular end-systolic and end-diastolic diameter) in Doberman Pinschers following echocardiographic diagnosis of cardiac disease (see sections 4.4 and 4.5).

For the treatment of dogs with myxomatous mitral valve disease (MMVD) in the preclinical stage (asymptomatic with a systolic mitral murmur and evidence of increased heart size) to delay the onset of clinical symptoms of heart failure (see sections 4.4 and 4.5).

4.3 Contraindications

Do not use pimobendan in hypertrophic cardiomyopathies or in diseases in which an improvement in cardiac output cannot be achieved for functional or anatomical reasons (e.g., aortic stenosis).

Since pimobendan is metabolised mainly via the liver, it should not be used in dogs with severe impairment of liver function.
Do not use in cases of hypersensitivity to pimobendan or to any of the excipients.

4.4 Special warnings for each target species

The product has not been tested in cases of asymptomatic DCM in Dobermans with atrial fibrillation or sustained ventricular tachycardia.
The product has not been tested in cases of asymptomatic myxomatous mitral valve disease in dogs with significant supraventricular and/or ventricular tachyarrhythmia.

4.5 Special precautions for use

Special precautions for use in animals

In dogs with existing diabetes mellitus, blood glucose should be tested regularly during treatment with pimobendan.

For use in the preclinical stage of dilated cardiomyopathy (asymptomatic with an increase in left ventricular end-systolic and end-diastolic diameter), a diagnosis should be made by means of a comprehensive cardiac examination (incl. echocardiographic examination and possibly Holter monitoring).

For use in the preclinical stage of myxomatous mitral valve disease (stage B2, according to ACVIM consensus: asymptomatic with mitral murmur \geq 3/6 and cardiomegaly due to myxomatous mitral valve disease), a diagnosis should be made by means of a comprehensive physical and cardiac examination which should include echocardiography or radiography where appropriate.

Monitoring of cardiac function and morphology is recommended in animals treated with pimobendan.

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

Accidental ingestion, especially by a child, may lead to the occurrence of tachycardia, orthostatic hypotension, flushing of the face and headaches.
Do not leave a filled syringe unattended.

This product may cause eye or skin irritation. Avoid skin and eye contact.
In case of accidental eye or skin contact, immediately rinse thoroughly with water.

In case irritation develops or if accidental ingestion occurs, seek medical advice immediately and show the package leaflet or the label to the physician.

People with known hypersensitivity to pimobendan should avoid contact with the product.

Do not eat, drink, or smoke while handling the product.

Wash hands after use.

Special precautions for the protection of the environment
Not applicable.

4.6 Adverse reactions (frequency and seriousness)

Dogs:

Rare (1 to 10 animals / 10,000 animals treated):	<ul style="list-style-type: none">- Vomiting¹, diarrhoea²- Anorexia², lethargy²- Increased heart rate^{1,3}- Increase in mitral valve regurgitation⁴
Very rare (< 1 animal / 10,000 animals treated, including isolated reports):	<ul style="list-style-type: none">- Mucosal petechiae⁵, haemorrhages(subcutaneous)⁵

1. Dose-dependent effects that can be avoided by reducing the dose.
2. Transient effects.
3. A mild, dose-dependent, positive chronotropic effect can occur that can be avoided by reducing dose.
4. Observed during chronic pimobendan treatment in dogs with mitral valve disease.
5. Potential effects on primary haemostasis may be observed during treatment. These signs disappear when the treatment is withdrawn. A relationship with pimobendan has not been clearly established.

Reporting adverse events is important. It allows continuous safety monitoring of a veterinary medicinal product. Reports should be sent, preferably via a veterinarian, to either the marketing authorisation holder or its local representative or the Veterinary Medicines Directorate via the national reporting system (<https://www.gov.uk/report-veterinary-medicine-problem>). See also section 16 of the package leaflet for contact details.

4.7 Use during pregnancy, lactation or lay

Laboratory studies in rats and rabbits have not produced any evidence of teratogenic or foetotoxic effects. However, these studies have shown evidence of maternotoxic and embryotoxic effects at high doses and have also shown that pimobendan is excreted into milk. The safety of the product has not been assessed in pregnant or nursing bitches. The product should only be administered to pregnant or lactating bitches in accordance with the benefit/risk assessment conducted by the responsible veterinarian.

4.8 Interaction with other medicinal products and other forms of interaction

In pharmacological studies no interaction between the cardiac glycoside ouabain (strophanthin) and pimobendan was observed. The pimobendan-

induced increase in cardiac contractility is attenuated by the calcium antagonists verapamil and diltiazem and by the β -antagonist propranolol.

4.9 Amount(s) to be administered and administration route

For oral use.

Do not shake the bottle before or during use to avoid foaming.

Determine the bodyweight accurately before treatment to ensure correct dosage.

The recommended dose is 0.25 mg pimobendan/kg bodyweight twice daily (equivalent to 0.17 ml of the veterinary medicinal product twice daily).

Doses should be given approximately 12 hours apart. Each dose should be given directly into the mouth on an empty stomach, and at least one hour before feeding.

The total bodyweight of the animal should be used to determine the dose for each administration. For example, for a 6 kg dog, the veterinary medicinal product should be drawn up into the provided syringe to the 6 kg mark at each twice daily administration. This 6 kg dose for twice daily administration equates to the recommended dose of 0.25 mg pimobendan/kg bodyweight.

A maximal recommended dosage range of 0.1 mg to 0.3 mg pimobendan/kg bodyweight twice daily should be respected (i.e., a total daily dose in the range 0.2 mg to 0.6 mg pimobendan/kg bodyweight per day). Do not exceed the recommended dosage range.

The solution should be given using the measuring syringe provided in the package. A second child-resistant cap with integrated plug-in adapter is provided and should be used after the bottle is first opened. The provided syringe fits onto the bottle and has a kg-bodyweight scale marked. Following administration of the product, any residual product remaining on the tip or outside of the dosing syringe should be wiped clean with a tissue. The contaminated tissue should be immediately disposed of. If the syringe clogs, rinse without removing the plunger by using water and wiping the outside of the syringe dry with a clean cloth or tissue. To avoid contamination, use the provided syringe only to administer Vetmedin 1.5 mg/ml oral solution. The used syringe should be stored with the product in the original carton. After administration of the veterinary medicinal product close the bottle tightly with the cap.

Pimobendan may also be used in combination with a diuretic e.g., furosemide or torasemide.

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

An overdose may cause a positive chronotropic effect, vomiting, apathy, ataxia, heart murmurs or hypotension. In this situation, the dosage should be reduced, and appropriate symptomatic treatment should be initiated.

In prolonged exposure (6 months) of healthy beagle dogs to 3 and 5 times the recommended dose, mitral valve thickening and left ventricular hypertrophy were observed in some dogs. These changes are of pharmacodynamic origin.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

Pharmacotherapeutic group: Cardiac stimulants excl. cardiac glycosides, phosphodiesterase inhibitors

ATCvet code: QC01CE90

5.1 Pharmacodynamic properties

Pimobendan, a benzimidazole-pyridazinone derivative has a positively inotropic action and possesses pronounced vasodilator properties.

The positive inotropic effect of pimobendan is mediated by two action mechanisms: increase in calcium sensitivity of cardiac myofilaments and inhibition of phosphodiesterase III. Thus, the positive inotropism is triggered neither by an action similar to that of the cardiac glycosides nor sympathomimetically.

The vasodilator effect arises from inhibition of phosphodiesterase III.

When used in cases of symptomatic valvular insufficiency in conjunction with furosemide the product has been shown to improve the quality of life and extend life expectancy in treated dogs.

When used in a limited number of cases of symptomatic dilated cardiomyopathy in conjunction with furosemide, enalapril and digoxin, the product has been shown to improve the quality of life and to extend life expectancy in treated dogs.

In a randomized and placebo controlled study in 363 dogs with preclinical myxomatous mitral valve disease, all dogs met the following inclusion criteria: age \geq 6 years, bodyweight \geq 4.1 and \leq 15 kg, characteristic systolic heart murmur of moderate to high intensity (\geq grade 3/6) with maximal intensity over the mitral area; echocardiographic evidence of advanced myxomatous mitral valve disease (MMVD) defined as characteristic valvular lesions of the mitral valve apparatus, echocardiographic evidence of left atrial and left ventricular dilatation and radiographic evidence of cardiomegaly (vertebral heart sum (VHS) $>$ 10.5. The median time to onset of clinical signs of heart failure or

cardiac death/euthanasia was extended in these dogs by approximately 15 months. Additionally, there was a reduction in the heart size of dogs treated with pimobendan in the preclinical stage of myxomatous mitral valve disease. Furthermore, overall survival time was prolonged by approximately 170 days in all dogs receiving pimobendan independent of their cause of death (cardiac death/ euthanasia and non-cardiac death/euthanasia). Cardiac related death or euthanasia occurred in 15 dogs in the pimobendan group and 12 dogs in the placebo group prior to the onset of CHF. Dogs in the pimobendan group spent a longer time in the study (347.4 patient years) than those in the placebo group (267.7 patient years) resulting in a lower rate of occurrence.

In a randomized and placebo-controlled study including Doberman Pinschers with preclinical dilated cardiomyopathy (asymptomatic with an increase in left ventricular end-systolic and end-diastolic diameter following echocardiographic diagnosis), the time to onset of congestive heart failure or sudden death was extended and survival time was prolonged among dogs administered pimobendan.

Additionally, there was a reduction in the heart size of dogs treated with pimobendan in the preclinical stage of dilated cardiomyopathy. Efficacy evaluation is based on data from 19 (of 39) and 25 (of 37) dogs that reached the primary efficacy endpoint in the pimobendan and the placebo group, respectively.

5.2 Pharmacokinetic particulars

Absorption:

After oral administration of this veterinary medicinal product the absolute bioavailability of its active substance is 60 to 63%. Since simultaneous or previous food intake reduces the bioavailability, pimobendan should be administered about 1 hour before feeding.

Distribution:

The volume of distribution is 2.6 l/kg, indicating that pimobendan is distributed readily into the tissues. The mean plasma protein binding is 93%.

Metabolism:

The compound is demethylated by oxidation to the major active metabolite (UD-CG 212). Further metabolic steps are phase II conjugates of UD-CG 212, such as glucuronides and sulphates.

Elimination:

The plasma elimination half-life of pimobendan is 0.4 ± 0.1 hours, which corresponds to the high clearance of 90 ± 19 ml/min/kg and the short mean residence of 0.5 ± 0.1 hours.

The most significant active metabolite is eliminated with a plasma elimination half-life of 2.0 ± 0.3 hours. Almost the entire dose is eliminated in the faeces.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Sorbic acid
Hydroxypropyl- β -Cyclodextrin
Hydroxypropyl methylcellulose
Ascorbic acid
Hydrochloric acid (for pH adjustment)
Sodium hydroxide (for pH adjustment)
Water, purified

6.2 Major incompatibilities

Not applicable.

6.3 Shelf life

Shelf life of the veterinary medicinal product as packaged for sale: 2 years.
Shelf life after first opening the immediate packaging: 8 weeks.

6.4 Special precautions for storage

Store below 30°C.

6.5 Nature and composition of immediate packaging

A 60 ml amber glass bottle is filled with 50 ml oral solution and is sealed with a child-resistant cap. A second child-resistant cap with integrated plug-in adapter is also provided and should be used after the bottle is first opened. Each bottle is packed in a cardboard box and is equipped with a measuring syringe.

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

Medicines should not be disposed of via wastewater.

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

7 MARKETING AUTHORISATION HOLDER

Boehringer Ingelheim Animal Health UK Limited
Ellesfield Avenue
Bracknell
Berkshire
RG12 8YS

8. MARKETING AUTHORISATION NUMBER

Vm 08327/5028

9. DATE OF FIRST AUTHORISATION

09 January 2025

10. DATE OF REVISION OF THE TEXT

January 2025

11. CLASSIFICATION OF VETERINARY MEDICINAL PRODUCT

POM-V

Veterinary medicinal product subject to prescription.

Find more information by searching for the 'Product Information Database' or 'PID' on www.gov.uk.

Gavin Hall

Approved: 03 March 2025