Veterinary Medicines Directorate

United Kingdom
Veterinary Medicines Directorate
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NATIONAL PROCEDURE

PUBLICLY AVAILABLE ASSESSMENT REPORT FOR A VETERINARY MEDICINAL PRODUCT

Mycinor 25 mg Tablets for Dogs
Mycinor 75 mg Tablets for Dogs
Mycinor 150 mg Tablets for Dogs
Mycinor 300mg Tablets for Dogs

MODULE 1

PRODUCT SUMMARY

Name, strength and pharmaceutical form	Mycinor 25 mg Tablets for Dogs Mycinor 75 mg Tablets for Dogs Mycinor 150 mg Tablets for Dogs Mycinor 300mg Tablets for Dogs
Applicant	Norbrook Laboratories Limited Station Works Camlough Road Newry Co Down BT35 6JP
Active substance(s)	Clindamycin (as clindamycin hydrochloride)
ATC Vetcode	QJ01FF01
Target species	Dogs
Indication for use	Mycinor Tablets are indicated for use in dogs as follows: For the treatment of infected wounds and abscesses, and infected mouth cavity and dental infections, caused by or associated with *Staphylococcus* spp, *Streptococcus* spp (except *Streptococcus faecalis*), *Bacteroides* spp, *Fusobacterium necrophorum*, and *Clostridium perfringens*. To help provide antimicrobial cover during dental procedures. For the treatment of superficial pyoderma associated with *Staphylococcus intermedius*. For the treatment of osteomyelitis, caused by *Staphylococcus aureus*. Before Clindamycin therapy is initiated, the involved pathogens should be identified and sensitivity to clindamycin established.

MODULE 2

The Summary of Product Characteristics (SPC) for this product is available on the Veterinary Medicines Directorate website (www.vmd.defra.gov.uk)

MODULE 3

PUBLIC ASSESSMENT REPORT

Legal basis of original application	Generic application in accordance with Article 13 (1) of Directive 2001/82/EC as amended.

I. SCIENTIFIC OVERVIEW

These were applications for generic products, submitted under Article 13 (1) of Directive 2001/82/EC as amended. Bioequivalence was claimed with the reference products Antirobe Capsules 25 mg, 75 mg, 150 mg and 300 mg respectively. The 25 mg, 75 mg and 150 mg products have been available since June 1989 and the 300 mg product has been available since May 2002. The tablets contain 25 mg, 75 mg, 150 mg and 300 mg of clindamycin (as hydrochloride) respectively. The indications are as follows: for the treatment of infected wounds and abscesses, and infected mouth cavity and dental infections, caused by or associated with *Staphylococcus* spp, *Streptococcus* spp (except *Streptococcus faecalis*), *Bacteroides* spp, *Fusobacterium necrophorum*, and *Clostridium perfringens*. To help provide antimicrobial cover during dental procedures. For the treatment of superficial pyoderma associated with *Staphylococcus intermedius*. For the treatment of osteomyelitis, caused by *Staphylococcus aureus*.

Before clindamycin therapy is initiated, the involved pathogens should be identified and sensitivity to clindamycin established.

The dose rate for treating wounds and abscesses, mouth cavity and dental infections is either 5.5 mg/kg bodyweight every 12 hours or 11 mg/kg bodyweight every 24 hours for 7 – 10 days. Treatment of superficial pyoderma is recommended for 21 days, with extension based on clinical judgement. For osteomyelitis, 11 mg/kg is given every 12 hours for a minimum of 28 days. Should no clinical response be seen within 14 days, the treatment should be stopped and the diagnosis redetermined.

The products are produced and controlled using validated methods and tests which ensure the consistency of the product released on the market. It has been shown that the products can be safely used in the target species, the slight reactions observed are indicated in the SPC[1]. The products are safe for the user, and for the environment, when used as recommended. Suitable warnings and precautions are indicated in the SPC. The efficacy of the products was demonstrated according to the claims made in the SPC. The overall benefit /risk analysis is in favour of granting a marketing authorisation.

[1] SPC – Summary of Product Characteristics.

II. QUALITY ASPECTS

A. Composition

The products contain 25 mg, 75 mg 150 mg or 300 mg clindamycin and excipients cellulose microcrystalline, lactose monohydrate, povidone, silicon dioxide, croscarmellose sodium and magnesium stearate.

The container system is packs of 150 tablets (100 tablets for the 300 mg product), in polypropylene tubs with low density polyethylene lids and cotton wool wadding. The particulars of the containers and controls performed are provided and conform to the regulation. The absence of preservative is justified.

The product is an established pharmaceutical form and its development is adequately described in accordance with the relevant European guidelines.

B. Method of Preparation of the Product

The product is manufactured fully in accordance with the principles of good manufacturing practice from a licensed manufacturing site. Process validation data on the product have been presented in accordance with the relevant European guidelines.

C. Control of Starting Materials

The active substance is clindamycin, an established active substance described in the European Pharmacopoeia (Ph. Eur). The active substance is manufactured in accordance with the principles of good manufacturing practice. The active substance specification is considered adequate to control the quality of the material. Batch analytical data for three batches of active substance demonstrating compliance with the specification were received. All excipients are described in the Ph. Eur.

D. Specific Measures concerning the Prevention of the Transmission of Animal Spongiform Encephalopathies

A declaration was provided stating that the finished product complies with the CPMP[2]/CVMP[3] guideline on transmissible spongiform Encephalopathies, in addition to a UK Format 2 statement which complies with requirements.

E. Control on intermediate products

Not applicable.

[2] CPMP – Committee for Proprietary Medicinal Products.
[3] CVMP - Committee for Medicinal Products for Veterinary Use.

F. Control Tests on the Finished Product

The finished product specification controls the relevant parameters for the pharmaceutical form. The tests in the specification, and their limits, have been justified and are considered appropriate to adequately control the quality of the products. Satisfactory validation data for the analytical methods have been provided. Batch analytical data from the proposed production site have been provided demonstrating compliance with the specification.

G. Stability

Stability data on the active substance have been provided in accordance with applicable European guidelines, demonstrating the stability of the active substance when stored under the approved conditions.

H. Genetically Modified Organisms

Not applicable.

J. Other Information

Shelf-life of the veterinary medicinal product as packaged for sale: 24 months

Do not store above 25°C.
Store in a dry place.

III. SAFETY AND RESIDUES ASSESSMENT (PHARMACO-TOXICOLOGICAL)

As these were generic applications according to Article 13, and bioequivalence with reference products has been demonstrated, results of pharmacological and toxicological tests are not required.

Warnings and precautions as listed on the product literature are the same as those of the reference products and are adequate to ensure safety of the products to users and the environment.

III.A Safety Testing

User Safety

The applicant has provided a user safety assessment in compliance with the relevant guideline. Warnings and precautions as listed on the product literature are adequate to ensure safety to users of the products.

Ecotoxicity

The applicant provided a first phase environmental risk assessment in compliance with the relevant guideline which showed that no further assessment was required. The assessment concluded that residues will reach the environment via dog faeces.

Warnings and precautions as listed on the product literature are adequate to ensure safety to the environment when the products are used as directed.

IV CLINICAL ASSESSMENT (EFFICACY)

As these were generic applications according to Article 13, and bioequivalence with reference products has been demonstrated, efficacy studies are not required. The efficacy claims for these products are equivalent to those of the reference products.

IV.A Pre-Clinical Studies

Pharmacology

Pharmacodynamics

As these were generic applications, there was no requirement for pharmacodynamic data, as the products were bioequivalent to the reference products.

Pharmacokinetics

An *in vivo* bioequivalence study and an *in vitro* dissolution study, (all strengths of Mycinor compared to all strengths of Antirobe), were presented.

For the bioequivalence study, a two-treatment period, two-sequence, randomised GLP[4] study with a 34-day wash-out period was performed in the target species. A suitable number of animals was divided into two groups, and given either the test product, 150 mg Mycinor Tablets for Dogs, or Antirobe capsules 150 mg. Doses of product were delivered at 11 mg/kg (to the nearest whole tablet or capsule). Blood samples were taken before and after administration from Day -1, at various time points. After plasma analysis, the products were shown to be bioequivalent.

Tolerance in the Target Species of Animals

The applicant has conducted a controlled target animal tolerance study using multiples of the recommended dose in the target species. A placebo was used as a control. All doses were administered by the oral route. A suitable number of dogs were divided into three groups. The first group received the product at 11 mg/kg/bodyweight twice daily for 30 consecutive days. The second group received the product at 33 mg/kg/bodyweight twice daily for 30 consecutive

[4] GLP – Good Laboratory Practice.

days. The third group was given placebo at one tablet per 13.5 kg/bodyweight. Clinical examinations were performed at various time-points during this non-necropsy, GLP[5]-compliant study. No adverse effects were seen.

The product literature accurately reflects the type and incidence of adverse effects which might be expected.

V OVERALL CONCLUSION AND BENEFIT– RISK ASSESSMENT

The data submitted in the dossier demonstrate that when the product is used in accordance with the Summary of Product Characteristics, the benefit/risk profile for the target species is favourable and the quality and safety of the product for humans and the environment is acceptable.

[5] GLP – Good Laboratory Practice.

MODULE 4

POST-AUTHORISATION ASSESSMENTS

The SPC and package leaflet may be updated to include new information on the quality, safety and efficacy of the veterinary medicinal product. The current SPC is available on the Product Information Database of the Veterinary Medicines Directorate website.

(www.gov.uk/check-animal-medicine-licensed)

The post-authorisation assessment (PAA) contains information on significant changes which have been made after the original procedure which are important for the quality, safety or efficacy of the product.

The PAA for this product is available on the Product Information Database of the Veterinary Medicines Directorate website.

(www.gov.uk/check-animal-medicine-licensed)