

Guidelines on Clinical Field Studies Testing Parasiticides

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VICH-Guidelines on the Efficacy of Anthelmintics

Efficacy Requirements: Overall Guideline (EAGR)	Dec00 Final/Impl
Spec. Recommendations for bovines	Dec00 Final/Impl
Spec. Recommendations for ovine	Dec00 Final/Impl
Spec. Recommendations for caprine	Dec00 Final/Impl
Spec. Recommendations for porcine	Jul02 Final/Impl
Spec. Recommendations for canine	Jul02 Final/Impl
Spec. Recommendations for feline	Jul02 Final/Impl
Spec. Recommendations for equine	Jul02 Final/Impl
Spec. Recommendations for poultry	Jul02 Final/Impl

CVMP-Guidelines on the Efficacy of Ectoparasides

Efficacy Testing for Cattle, Sheep and Goats	Nov01 Consult
Efficacy Testing for the treatment and prevention of tick and flea infestation in Dogs and Cats	May01 Final

Further Guidelines applicable

Good Clinical Practice (VICH)	Jul01 Final/Impl
Statistical Guideline (CVMP)	May01 Consult
WAAVP guidelines for evaluating the efficacy of anthelmintics for dogs and cats	1994

Objective of Guidelines

1. Serve as models for government officials
2. Assist investigators in preparing basic plans to demonstrate effectively the efficacy of products
3. Optimise the number of trials and experimental animals used for drug testing
4. Ensure the quality of the studies

All Guidelines focus mainly on well-controlled Lab-based studies!

Assessment Criteria for Field Efficacy

1. Parasite counts

- Anthelmintics: epg / larval counts
- Ectoparasites: number of fleas/ticks etc.

2. Better or equal than the control group

3. Calculation of percent effectiveness

- Anthelmintics: geometric mean (> 90 %)
- Ectoparasites: arithmetic mean (> 90 %)

Requirements for Different Regions

1. Anthelmintics

- Not mentioned, although requested in the EAGR to be answered specifically per species

2. Ectoparasites

- Dogs and Cats: 2 diff. geographic regions
- Sheep (blowfly): 2 diff. geographic regions

WAAVP (1994): several different geographic regions

Replicate Number per Group

1. Anthelmintics

- Minimum 6 per group (dependent on the statistical approach)

2. Ectoparasites

- Dogs & Cats: ticks 50, fleas 50 (per region)
- None mentioned but sheep „stripping“ (200)

WAAVP (1994) Dog & Cat: 100 from each region

Minimum of 300 dogs / 150 cats

Controlled Studies

1. Anthelmintics

- Placebo hardly acceptable to use in the field!
- Positive control not explained!

2. Ectoparasites

- Placebo difficult to use in the field
- Positive control not explained, even not considered for the replicate number

Specific Protocols

1. Anthelmintics

- A lot of specific guidance for artificial infestations; little guidance for field studies
- No guidance for tapeworm

2. Ectoparasites

- Detailed data capture forms and formular for analysis given, but ...

Protocol in Ticks/Fleas

1. Evaluation of efficacy:
 - by owners?
 - just for absence / presence?
2. GCP requests more detailed data: e.g.
 - Drug accountability,
 - Owner consent,
 - Concomittent treatments,
 - Concurrent disease,
 - Treatment (exact dosage),
 - Observation of the site of treatment application
3. Simplifying, therefore hazardous to follow

Ectoparasite Guidelines

- Give detailed guidance for both lab-based and field studies
 - Lack of guidance for positive controlled studies
- May contradict with other guidelines, e.g.:
 - Replicate numbers: Statistical Guideline
 - Protocol: Good Clinical Practice Guideline

Anthelmintic Guidelines

- Give detailed guidance for lab-based infestations
- Are general, species specific and consistent
- Do not give detailed guidance for field studies for both round- and tapeworms
- Lack of guidance for positive controlled studies
- Fit well into the concept of GCP and Statistical Guideline

Quality of Data

- Following the guidelines reduces risk to fail with the scientific quality of data
- Documentation and transparency of the conduct of studies is essential for the integrity, accuracy and correctness of studies (GCP requirements)
- Fraud should be limited but its possibility kept in mind (what happens if guidelines are not followed?)

Conclusion

- Useful for the sponsor, investigator and assessor for the evaluation of studies
- Anthelmintic and Ectoparasite Guidelines are not consistent in giving guidance incl. EAGR
- Do not guarantee for 100 % quality of the study!
- Future Claim/Species specific guidelines need to fit well into the concept of the general guidelines („GCP“ and „Statistical Principles for Vet. Clinical Trials“)



Thank you!

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