SCIENTIFIC QUALITY ASSESSMENT OF CLINICAL TRIALS RELATED TO HOMEOPATHY APPLIED TO VETERINARY MEDICINE

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OBJECTIVE

To assess the risk of bias (RoB), using the SYstematic Review Centre for Laboratory animal Experimentation (SYRCLE) tool by Hooijmans et al., 2014, of a selection of Randomised Clinical Trials (RCTs) of homeopathy in veterinary medicine.

INTRODUCTION

The word homeopathy comes from the Greek words "homoios" meaning similar and "pathos" meaning disease.

The theoretical basis of homeopathy can be broken down into three pillars:

1. The law of similars
2. The principle of individualisation
3. The infinitesimal principle

There are two main reasons why homeopathy is not widely accepted:

1. The manufacturing process.
2. Limited scientific evidence.

Are the results of published clinical trials of homeopathy in veterinary medicine reliable?

Risk of Bias (RoB)

The risk of bias assessment provides us with information on the **validity** of the RCT, as well as the **confidence** we can have in the results of a Randomized Clinical Trial (RCT).

Most research, conducted through RCT, where homeopathy is tested in veterinary medicine, addresses problems in farm livestock (Hektoen, 2005; Mathie & Clausen, 2014). They are usually conducted to evaluate the efficacy of homeopathy and to offer new alternative therapies for common problems in livestock. In this way, new lines of treatment can be tested. For any of these objectives, the evaluation of RDS is essential in order to understand the validity of the findings and to be able to critically assess the effectiveness and safety of treatments applied in veterinary medicine.

MATERIAL & METHODS

RCT selection

PubMed 1992 to 2022

"Veterinary OR Animals" AND "Homeophathy OR Homeopathic"

RoB assesment

SYRCLE

SYstematic Review Center for Laboratory animal Experimentation

Type of bias	Domain	Review authors judgment
Selection	1. Sequence generation	Was the allocation sequence adequately generated and applied?
	2. Baseline characteristics	Were the groups similar at baseline or were they adjusted for confounders in the analysis?
	3. Allocation concealment	Was the allocation adequately concealed?
Performance	4. Random housing	Were the animals randomly housed during the experiment?
	5. Blinding	Were the caregivers and/or investigators blinded from knowledge which intervention each animal received during the experiment?
Detection	6. Random outcome assessment	Were animals selected at random for outcome assessment?
	7. Blinding	Was the outcome assessor blinded?
Attrition	8. Incomplete outcome data	Were incomplete outcome data adequately addressed?

Figure 1. SYRCLE's tool for assessing risk of bias

RESULTS

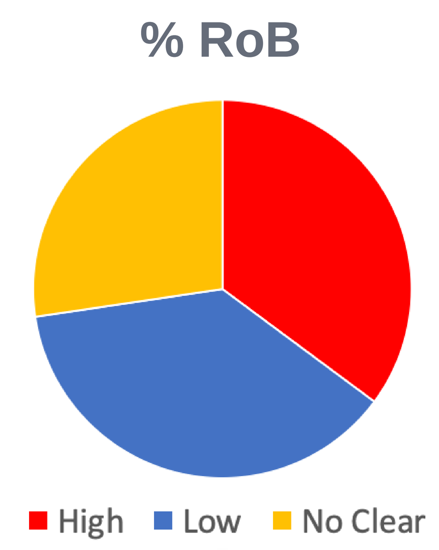

Figure 2. Pie chart showing the distribution of the risk of bias in all domains analysed.

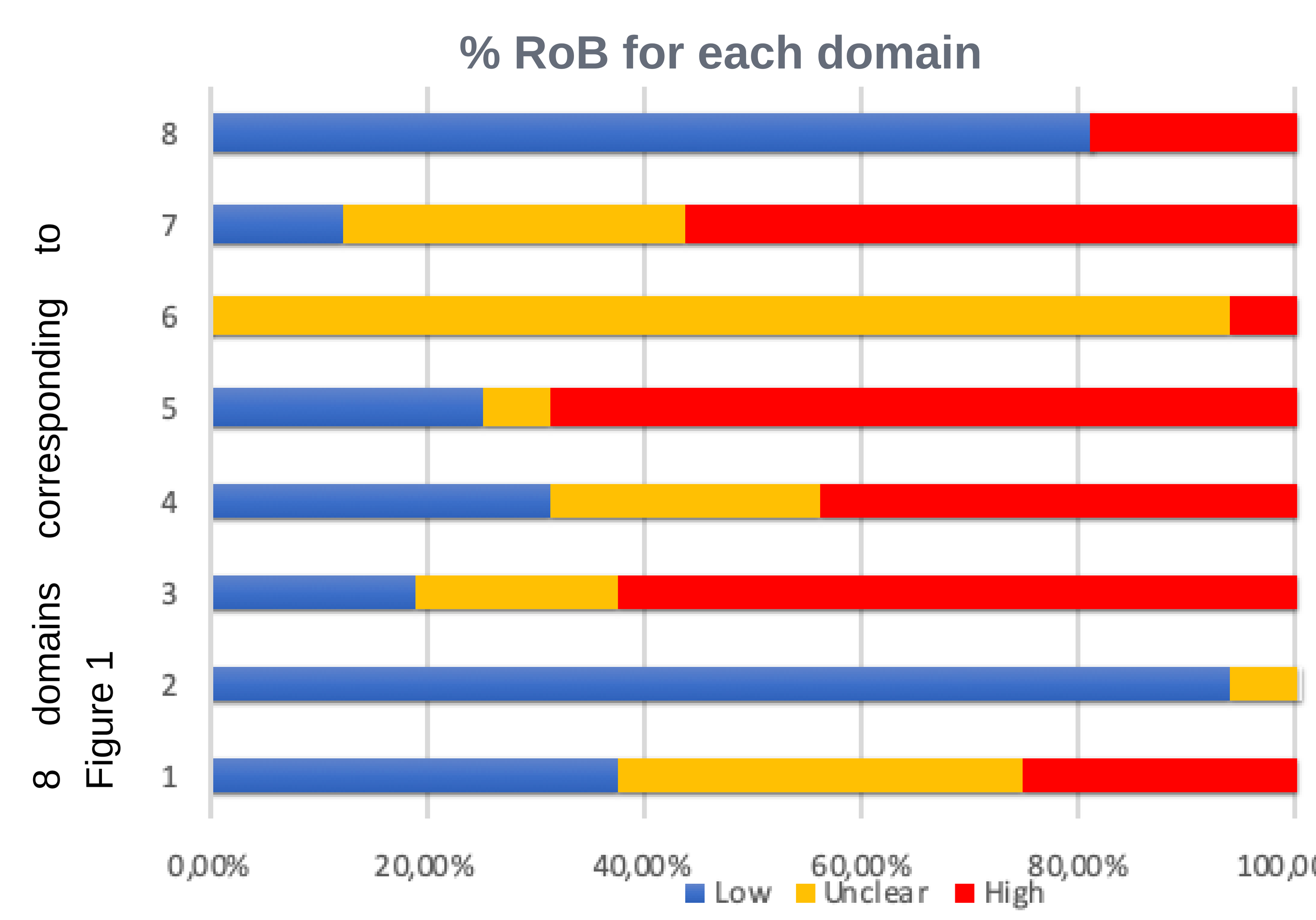

Figure 3. Bar chart showing the distribution of domains at each risk level for each domain mentioned in t Figure 1.

DISCUSION

- A domain is categorised as having an uncertain risk of bias when there is insufficient reported information on the methodology in the study to assess that domain positively or negatively. The omission of information on some methodological aspects is a barrier to reaching a useful conclusion on the efficacy of medicines and interventions (Kilkenny et al., 2010).
- Hooijmans et al. 2014 states that the domains should be adapted to the RCTs we want to assess for risk of bias. This specification is due to the fact that domains with high risk values may not necessarily mean bias in the results, due to the characteristics of the RCT analysed.

CONCLUSION

- **There is room for improvement in the quality of homeopathy studies in veterinary medicine.**
- **The tool proposed by SYRCLE (Hooijmans et al., 2014) will always be useful for assessing the internal validity of RCTs in this branch of research, provided there is good quality reporting of information by the investigators.**

Relevant bibliography

1. Hooijmans, C. R., Rovers, M. M., Bm De Vries, R., Leenaars, M., Ritskes-Hoitinga, M., & Langendam, M. W. (2014). SYRCLE's risk of bias tool for animal studies. http://www.biomedcentral.com/1471-2288/14/43
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