Proceedings of the

4-7 July **2000** – Valencia Spain

These proceedings were printed as a special issue of WORLD RABBIT SCIENCE, the journal of the World Rabbit Science Association, Volume 8, supplement 1

ISSN reference of this on line version is 2308-1910
(ISSN for all the on-line versions of the proceedings of the successive World Rabbit Congresses)

PRADELLA G., SAGGIORATO M., BUCCI A.

FIELD EXPERIENCE ON THE USE OF INJECTABLE TILMICOSIN IN RABBIT DOES DURING POST-PARTUM PERIOD

Volume B, pages 351-353

FIELD EXPERIENCE ON THE USE OF INJECTABLE TILMICOSIN IN RABBIT DOES DURING POST-PARTUM PERIOD

PRADELLA G.*, SAGGIORATO M.*, BUCCI A.**

*Eli Lilly Italia S.p.A. Divisione Elanco Animal Health - via Gramsci, 733 - 50019 Sesto Fiorentino (FI) - Italy.
**Veterinario libero professionista - Padova

ABSTRACT

A field trial was carried out to evaluate the safety and tolerance of injectable tilmicosin in rabbit does. The results confirm the safety of the treatment under practical conditions and suggest it may be used in commercial rabbitries as an alternative to treatments like penicillin-streptomycin

INTRODUCTION

Tilmicosin is a semisynthetic macrolide antibiotic currently approved for veterinary use in cattle, swine and poultry. The activity of tilmicosin includes *Pasteurella multocida*, *Bordetella bronchiseptica* and *Staphylococcus aureus* the most important bacteria, with *E. coli*, involved in the pathology of the breeder and fattening rabbits (Cerrone A. et al. 1999)
The efficacy and pharmacokinetics of tilmicosin administered by injection to rabbits at 25 mg/kg dosage has been investigated by Sharon G. Mc Kay et al. (1996).
Pasteurellosis occurs especially at weaning and the subsequent growth period and, in Italy, represents the second commonest cause of death in rabbits after enteric disease. The breeding does constitute a constant reservoir of *Pasteurella multocida*, and young rabbits are generally infected by contact with their own mothers. *Staphylococcus aureus* is the most important bacterium isolated from clinical mastitis in commercial rabbits. Staphylococcal mastitis in rabbits occurs more often in skin lesions associated with a high energy/protein level feed. In breeding does, *S. aureus* may also infect the uterus and produce a purulent exudate and/or infertility. The incidence of mortality in litters from breeding does with clinical mastitis is higher than standard. Unweaned rabbits may die suddenly after feeding from toxaemia or septicaemia or develop a chronic/subchronic disease. In young rabbits between weaning and puberty, staphylococcosis is not frequent and may occur as a purulent pneumonia.
In order to provide information on the safety and tolerance of tilmicosin administered by injection to rabbits, the effect was evaluated in a field trial.

MATERIALS AND METHODS

The experience was carried out in two commercial rabbitries between August '97 and January ’98 involving a total of 2 280 female breeding does and 21 218 young rabbits divided into 6 reproductive cycles. Before parturition the pregnant female were divided in two groups and after parturition the litters were balanced in order to make uniform the number of young rabbits to 8 or 9 for each nest. Within five days of parturition all breeding does were treated as follow:

Group 1) single subcutaneous treatment with injectable tilmicosin at 10mg/kg dosage
Group 2) single subcutaneous treatment either with penicillin at 40.000 U.I./kg + streptomycin 40 mg/kg, or with penicillin at 40.000 U.I./kg + streptomycin 40 mg/kg + gentamycin 10 mg/kg .

The following parameters were considered from parturition to 35 days:

- Daily mortality (breeding does and unweaned rabbits)
- Adverse reaction at the injection site
- N° of breeding does removed for pathology
- Incidence of pneumonia, mastitis, metritis

RESULTS AND DISCUSSION

The data collected during the study are summarised in Tables 1 and 2. In the whole study, tilmicosin *versus* penicillin/streptomycin and tilmicosin *versus* penicillin/streptomycin + gentamicin, there were no significant differences for any of the parameters considered and their values are in agreement with the standards observed in Italian commercial rabbit production. No adverse reactions were observed in animals, which confirms the safety and the handling of tilmicosin administered by injection at the dosage of 10 mg/kg. In conclusion, tilmicosin injected at 10 mg/kg after parturition was safe, well tolerated and may be used in commercial rabbitries as an alternative to treatments like penicillin-streptomycin.

Table 1: Rabbitry 1: mortality, adverse reactions and incidence of mastitis, metritis, pneumonia.

		N° of Does	Adverse reactions	Mortality (Does)	Mortality % (Young rabbits)[1]	Does removed[2]	Mastitis	Pneumonia	Metritis
CYCLE 1	Tilmicosin	345	0	9	4.59 %	43	1	4	7
	Pen/Strepto	345	0	11	4.59 %	40	2	4	6
CYCLE 2	Tilmicosin	345	0	4	3.55 %	35	0	3	1
	Pen/Strepto	345	0	7	4.71 %	49	0	4	3
CYCLE 3	Tilmicosin	345	0	4	3.90 %	37	0	3	4
	Pen/Strepto	345	0	6	3.75 %	43	1	5	8

[1] After the egalisation.
[2] Are included does removed for not pregnancy and old age.

Table 2: Rabbitry 2: mortality, adverse reactions and incidence of mastitis, metritis, pneumonia.

		N° of Does	Adverse reactions	Mortality (Does)	Mortality % (Young rabbits)	Does removed	Mastitis	Pneumonia	Metritis
CYCLE 1	Tilmicosin	34	0	0	6.98 %	0	1	0	1
	Pen/Strepto	34	0	1	8.82 %	0	2	1	0
CYCLE 2	Tilmicosin	40	0	0	4.37 %	1	0	0	1
	Pen/Strepto + Gentamycin	40	0	0	6.56 %	1	1	0	0
CYCLE 3	Tilmicosin	31	0	0	5.53 %	1	0	0	0
	Pen/Strepto	31	0	1	7.37 %	0	1	0	0

REFERENCES

CERRONE A. et al. 1999. L'impiego degli antibiotici nell'allevamento cunicolo intensivo. Riv. di coniglicoltura Dec,(11):47-54

DEEB BJ et al. 1990. Pasteurella multocida and Bordetella bronchiseptica infection in rabbits. J. Clin. Microbiol, Jan; 28(1):70-5

SHARON G. MC KEY et al. 1996. Use of tilmicosin for treatment of pasteurellosis in rabbits. AJVR, 57(8):1180-1184

WEISBROTH S.H. et al. 1974. The biology of the laboratory rabbit. Academic Press, New York and London, 194 -198