

Efficacy of three treatment regimens of a deltamethrin solution (Deltanil®) in the management of *Hippobosca equinum* infestation in horses.

C. Navarro^{a*}, J.M. Casamatta^b, S. Viaud^c

^a VIRBAC, Carros, France, ^b Clinique Equine de Conques, Saint Aubin de Branne, France, ^c Aquivet Veterinary Clinic, Eysines (Bordeaux), France
* Corresponding author: christelle.navarro@virbac.com



F. Decante©Virbac

Introduction

Deltamethrin is a pyrethroid commonly used in cattle and dogs for the management of external parasite infestations. Deltanil® (Virbac, France) is a deltamethrin solution which has proven to be safe for use in horses (Mc Gahie, 2014).

Hippobosca equinum (louse fly) is a common parasite in France where its maximum of activity is in July. The parasite is mainly located in the inguinal and perineal area and may cause violent reactions from the horses

This randomised, blinded, controlled clinical trial assessed the efficacy of Deltanil® in the management of louse fly infestation in horses.

Materials and Methods

- Study design:** Randomised, controlled (untreated), blinded. The study took place in July 2014 in the south-west of France.
- Animals & treatment:** Seven days before the start of the trial (D -7), 56 resting horses from the same farm were randomly allocated to a treatment regimen group based on pasture location (**Fig. 1**) and a semi-quantitative evaluation of parasite number in the anal area (**SQP score**) on a 0-3 scale.
- Horses were treated with 10ml deltamethrin applied to the back area from the tail to the mane:
 - every week (Group 1) (D1, D8, D15, D22, D29),
 - every four weeks (Group 2) (D1, D29),
 - every two weeks (Group 4) (D1, D15, D29),
 - or were left untreated (Group 3).
- Parasite evaluation:** SQP score and count of flies on pictures from four body regions (head, body, inguinal and anal areas) were performed
 - on Day 1 (before treatment),
 - and subsequently on Days 2, 3, 8, 15, 22, 29, 36.The total number of flies (*H. equinum*) per horse and per day was calculated by adding the counts of flies on each body region (**P score**).

- Pastures' map (Fig. 1):**
 - Group 1 (green) = Pastures 1 & 10
 - Group 2 (red) = Pastures 2, 3, 9 & 10
 - Group 3 (blue) = Pastures 4 & 5
 - Group 4 (orange) = Pastures 6 & 7

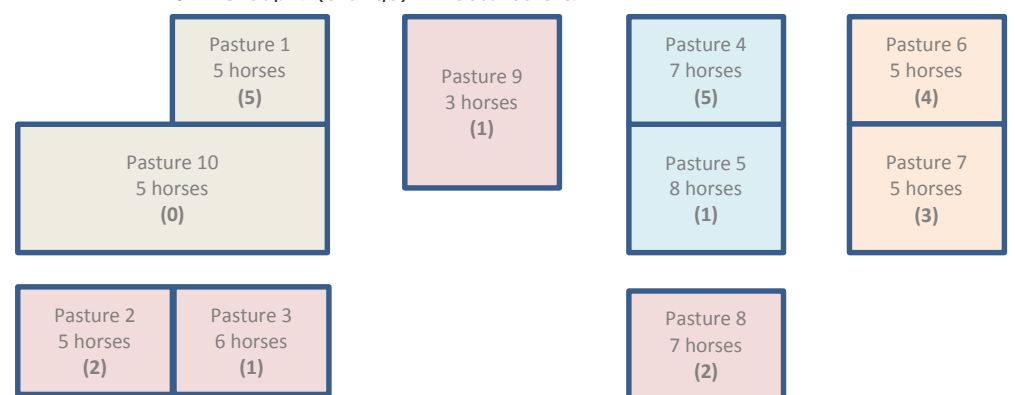


Fig. 1: Pastures' map (pasture number, number of horses treated, number of horses included in the efficacy analysis (bold, between brackets))

Results

No side effects were observed in the 41 horses being administered the product.

Twenty-four horses with an SQP score ≥ 1 on D -7 were included for efficacy evaluation (number of horses in bold and between brackets on the figure 1).

The mean SQP score and P score before treatment were 1.75 [1-3] and 5.5 [0-20] respectively (**Figures 2 & 3**). No louse flies (*H. equinum*) were found on the head or on the body.

In the untreated control group SQP score remained above 1, and P score above 3 throughout the study. In the treatment groups, both scores were equal to 0 on all evaluation days. (**Fig. 2 & 3**).

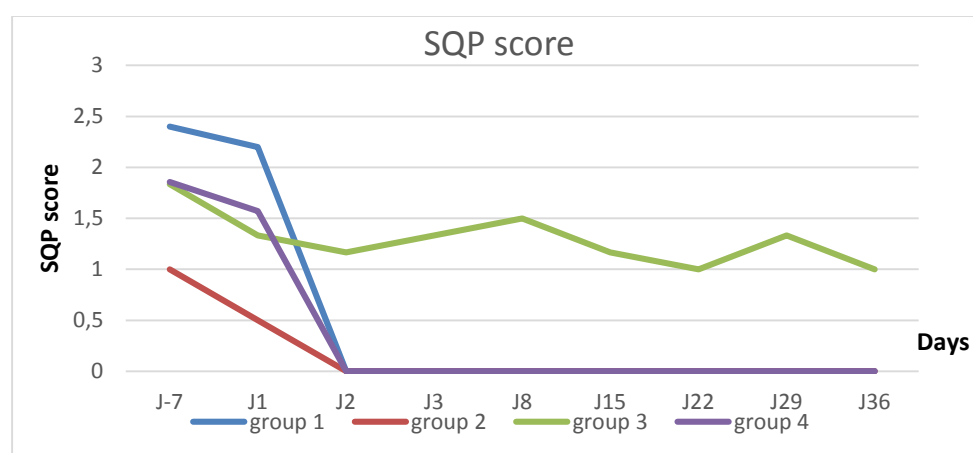


Fig. 2: SQP scores (Group 1 = weekly treatment, Group 2 = monthly treatment, Group 3 = untreated, Group 4 = bi-monthly treatment)

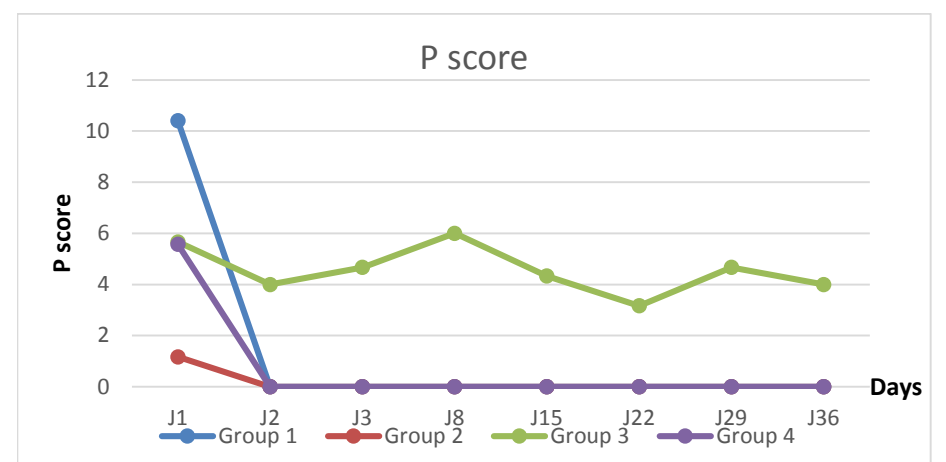


Fig. 3: P scores (Group 1 = weekly treatment, Group 2 = monthly treatment, Group 3 = untreated, Group 4 = bi-monthly treatment)

Conclusion

Deltanil® was well tolerated by horses when applied from once a week to once a month. It rapidly decreased (in less than 24 hours) louse fly infestation, and prevented further infestations for at least one month after application in resting horses.



McGahie D., Navarro C. Safety of a topical deltamethrin solution (Deltanil®) in horses. Voorjaarsdagen congress 2014

Shaping the future of animal health

