EFFICACY UNDER FIELD CONDITIONS OF THE NEW VACCINE UBAC® IN THE REDUCTION OF *Streptococcus uberis* CLINICAL MASTITIS IN DAIRY COWS DURING A WHOLE LACTATION PERIOD

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OBJECTIVES

To evaluate the efficacy of the new vaccine UBAC® (HIPRA) in the reduction of the incidence of *Streptococcus uberis* clinical mastitis in dairy cows during a whole lactation period.*

** The present study corresponds to an extension of a multicenter, randomized, double blinded and placebo-controlled clinical trial presented in another poster in this Congress entitled 'Efficacy and safety under field conditions of the new vaccine UBAC® against Streptococcus uberis intramammary infections in dairy cows.'*

MATERIALS AND METHODS

The study was performed in six commercial dairy farms with historical records of *S. uberis* clinical mastitis (CM) and microbiologically confirmed presence of this agent at the start of the study. Healthy pregnant, heifers and cows negative to *S. uberis* were administered either UBAC® (n = 401) or a Placebo (Sterile phosphate buffer solution) (n = 380) following the vaccination schedule in Figure 1.

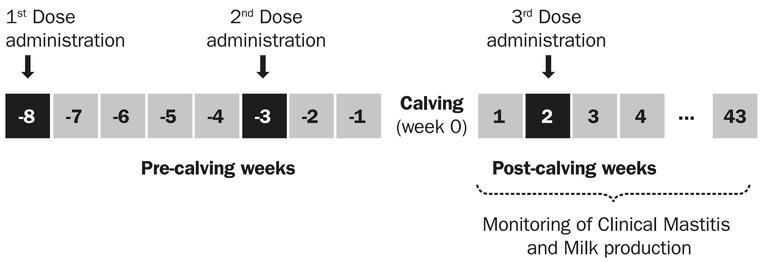

Figure 1. Scheme of the study design.

Animals were monitored up to 43 weeks after calving for incidence of CM. Aseptic milk samples from the affected quarters were obtained for microbiological analysis of *S. uberis*. Individual milk production was recorded in five out of the six farms.

RESULTS

Incidence of animals with one or more episodes of *S. uberis* CM during the whole lactation period was statistically significantly lower in UBAC® group than in the Placebo group (Fig. 2). More precisely, the incidence of cows with *S.uberis* CM was reduced by 55% after vaccination with UBAC®.

Similarly, when analyzing data in terms of new episodes it was confirmed that the incidence of *S. uberis* CM new episodes reported in the UBAC® group was also statistically significantly lower than those reported in the Placebo group (Fig. 3), in this case with a reduction of 56%.

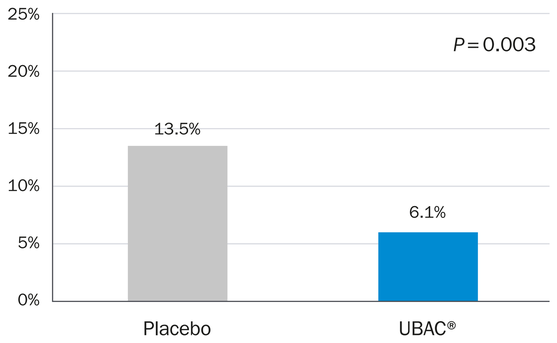

Figure 2. Incidence of animals with one or more episodes of *S. uberis* clinical mastitis recorded in each group up to 43 weeks after calving.

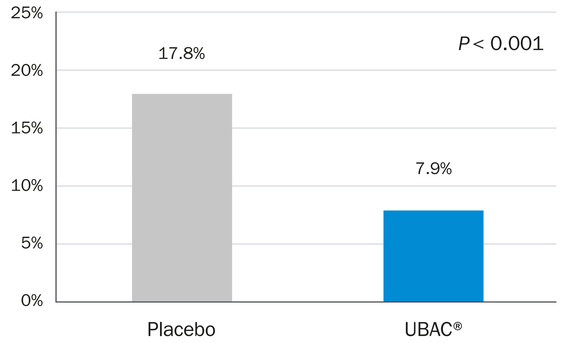

Figure 3. Incidence of new episodes of *S. uberis* clinical mastitis recorded in each group up to 43 weeks after calving.

Finally, mean *daily milk production at herd level during the whole lactation period was 0.4 L/day higher in the UBAC® group than in the Placebo group* (36.4 vs 36.8 L/day, respectively; $P = 0.183$). Although not statistically significant, these differences are considered relevant for the farmer from the economical point of view and might be explained not only by the effect of vaccination with UBAC® on the incidence of *S. uberis* CM but also by its effect on the severity of the mastitis that, unfortunately, was not evaluated in this study.

CONCLUSIONS

The new vaccine UBAC® is efficacious in reducing the incidence of *S. uberis* clinical mastitis during the whole lactation period in herds with presence of this agent.

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