INTRODUCTION

A new vaccine against Streptococcus uberis intramammary infections in cows, UBAC® (HIPRA), has been developed (Collado et al., 2018). The aim of this study was to evaluate the serological immune response against the vaccine antigen (Biofilm Adhesion Component, BAC) during a clinical trial (Puig et al., 2018).

METHODS

A clinical field trial was performed in order to assess the efficacy of UBAC® in the reduction of S.uberis clinical mastitis (CM) up to the half-lactation period as described in Figure 1.

In this context, blood samples from UBAC® (n=25) and placebo (n=21) groups were collected before each dose of the vaccine and 1, 3 and 6 months after the 3rd dose.

Immunoglobulin G2 (IgG2) response against the BAC antigen in serum samples was assessed by the ELISA method described in Collado et al., (2018). Serological data were compared using the Mann-Whitney test (SPSSv.22). Significance was declared at \( p \leq 0.05 \).

RESULTS

Antibody levels against the BAC antigen increased from the 1st dose of UBAC®, reaching a maximum 1 month after the 3rd dose. They then slowly decreased up to the end of the monitoring period, remaining much higher than in the placebo group throughout the monitoring period.

CONCLUSIONS

Results obtained in this study suggest that antibodies against the BAC antigen could have a role in the reduction of the incidence of clinical mastitis caused by S. uberis. Therefore, a booster dose of the vaccine 6 months after the prime vaccination is recommended in order to maintain high antibody levels against the BAC antigen in vaccinated animals.

REFERENCES


Puig A, Perozo E, et al., Efficacy and safety under field conditions of the new vaccine UBAC® against Streptococcus uberis intramammary infections in dairy cows, Poster presented in the 2018 International Bovine Mastitis Conference, Milano, Italy.