

The immune response in cattle infected with *Tritrichomonas foetus*.

Soto P¹, Parma AE.

⊕ Author information

Abstract

Holando-Argentina calves (males and females) were experimentally infected with *Tritrichomonas foetus* var. Belfast (*T. foetus*) by introducing 10(7) protozoa into the preputial and vaginal cavities, in order to analyse the course of the immune response to infection. Samples of serum, vaginal mucus and preputial secretion were taken periodically and assayed by means of microagglutination of living protozoa. The serum antibody titre, which averaged 32 before infection and was equivalent to titres in a non-infected group, increased to 512 in the heifers 11 weeks later and to 128 in the bulls 4 months post-infection. Agglutinating antibodies were not detected in the preputial cavity, but heifers showed antibodies in the vaginal mucus and became trichomoniasis free after 4 months. Conversely, genital secretions from the bulls gave rise to positive cultures during the whole period of experimentation. The intradermal sensitivity was checked using a soluble antigen from *T. foetus*. The diameter of the papula increased up to three times in heifers, while in bulls the results were no different than those from the non-infected group. Serum antibodies were of the IgG2 subclass, while those isolated from vaginal mucus were characterized as IgG1, an opsonizing antibody. Heifers were refractory to challenge infection after 1 year. The poor immune response in bulls is consistent with their role as carriers of *T. foetus*.