Effect of intranasal attenuated Pasteurella multocida B:2 on haemorrhagic septicaemia in calves.

ABSTRACT

This report describes the effect of vaccination with attenuated P. multocida B:2 on wild-type P. multocida B:2 infection in calves. Calves were given 5 ml intranasal 10^7 CFU/mL live attenuated gdhA derivative of P. multocida B:2. Untreated calves were then mingled with the vaccinated Group. Control untreated calves were kept separate. After 6 weeks, all calves were challenged intra-tracheally with 10^7 CFU/mL of live wild-type P. multocida B:2. At Post-Mortem none of the vaccinated or mingled calves had lesions whereas controls revealed pulmonary petechial haemorrhages with acute pneumonia patches with neutrophils. Both exposed and commingled calves showed significantly (p<0.05) higher levels of serum IgG. P. multocida B:2 were successfully isolated only from the control calves of Group 3. These findings suggest that intranasal exposures to live attenuated P. multocida B:2 prevented infection by wild-type P. multocida B:2 and may have protected susceptible calves.

Keyword: Intranasal; Attenuated Pasteurella multocida B:2; Infection.