Compatibility of a VAXXITEK® HVT+IBD vector vaccine with vaccination of Newcastle Disease and Infectious Bronchitis at day old

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The compatibility of a VAXXITEK HVT+IBD vector vaccine against Marek (MD) and Gumboro (IBD) diseases delivered through subcutaneous injection to one-day-old chicks, with the vaccination against Newcastle disease and Infectious Bronchitis delivered by spray, was studied and verified by three trials. In the first one, conventional broilers were vaccinated using AVINEW® (ND) and H120 (IB) strains. They were simultaneously given 1 dose of a vector HVT-IBD vaccine. Some chicks of same origin were kept unvaccinated. Twenty birds of each group were allocated at 21/22 and 42 days-old to groups for virulent ND and IB challenges. The protection against IBD and MD was studied in the following trials on SPF birds. 80 chicks were vaccinated as follows at one day old: 30 were given one dose of the vector vaccine alone, 20 one dose of the associated vaccination ND/IB and 30 both treatments together. A virulent IBD challenge was performed 14 days post vaccination with the strain of classical virulence F52/70. In the third trial, 3 groups of 36 one-day-old birds received the same treatments as in trial 2. They were challenged 9 days later with the strain of classical virulence GA22; the challenge reading was performed through macroscopic observation at 79 days of age.

In the 3 trials, serological conversion and protection against the corresponding challenges were observed. On these groups the protection scores were above 90% (Figures 1 & 2). No negative effect was observed due to the vaccine association. We conclude that the associated vaccination against four of the main chicken pathologies MD, ND, IB and IBD is possible from one day of age using VAXXITEK HVT+IBD and classical ND and IB vaccines.

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Figure 1: protection against ND and IB early challenges

![Early protection against challenge D21/D22](chart)

Figure 2: protection against ND and IB late challenges

![Late protection against challenge D42](chart)