Compatibility of a novel vector vaccine HVT-Gumboro with Newcastle and infectious bronchitis vaccination at one day of age

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The compatibility of a 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. Control 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: Eighty chicks were vaccinated as follows at one day-old: 30 were given one dose of the vector HVT-IBD vaccine alone, 20 received one dose of the associated vaccination ND/IB and 30 received both treatments. 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 MD 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. In vaccinated groups the protection scores were above 90%. 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 as from one day of age, using a combination of a vector vaccine HVT-IBD and classical ND and IB vaccines.