Safety and efficacy of 9R Live attenuated vaccine against fowl typhoid in partridges species

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Abstract

Fowl typhoid is a significant poultry disease worldwide affecting mainly chickens and turkeys. However, other bird species, such as partridges, can also be affected. In Morocco, the disease causes a high mortality rate in farmed partridges, and the use of antibiotics is not effective. Therefore, vaccination of partridges against fowl typhoid is an absolute priority if this breed is to be preserved in Morocco. Moreover, the effectiveness of vaccines against FT in the partridge species has not been extensively studied. Given the negative impact on partridge farms in Morocco, this study was conducted to assess the safety and efficacy of the locally produced 9R vaccine, AVIVAX SG-9R, in partridges.

Table 2: Efficacy test study design at 15 weeks of age

Vaccinated partridges received a subcutaneous administration of a dose of 2.107CFU at 6 weeks of age, followed by a second vaccination at 12 weeks of age. The challenge test was carried out at 14 weeks of age with a dose of 104 CFU/ ml of Salmonella Gallinarum MSG1 strain.

The results indicate that the 9R live vaccine is safe and effective. There were no mortalities or macroscopic lesions observed in the vaccinated birds. The challenge test demonstrated 65% protection in the vaccinated challenged partridges, with a reduction in mortality and organ invasion. In contrast, the control group exhibited 70.6% mortality.

In conclusion, the 9R live vaccine, can reduce flock losses due to fowl typhoid and contribute to the reduction of infection. Vaccination should be considered as part of a fowl typhoid eradication program.