

Porcine Haemophilus Pleuropneumonia:
Efficacy of Vaccination Demonstrated
Using an Aerosol Challenge Method

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Interest in Haemophilus pleuropneumonia (parahaemolyticus) has steadily increased in the last decade. The disease, caused by this bacteria, pleuropneumonia in swine, was described as early as 1957 (1).

The efficacy of experimental vaccines to control the disease has been primarily determined through field studies (2,3).

In this study, the efficacy of Haemophilus pleuropneumonia bacterins was evaluated using an aerosol challenge method. Two vaccine preparations were evaluated: Vaccine A contained inactivated bacterial cultures emulsified in an oil adjuvant while Vaccine B contained these same bacterial cultures in a polymer adjuvant.

Ten animals were vaccinated twice with either Vaccine A or Vaccine B while 10 animals served as unvaccinated controls. Fifty percent of the control animals died within three days following challenge. Prior to death these animals demonstrated respiratory distress, with substantial amounts of nasal exudate. Epistaxis was seen with mortality. There was no mortality in either of the vaccinated groups.

Two weeks following challenge, all surviving animals were sacrificed and necropsied. The lungs were scored as follows: 0 = normal lung, 1 = lungs with consolidation, 2 = lungs with consolidation and evidence of fibrin coats, 3 = lungs with consolidation and pleural adhesions, 4 = lungs with consolidation, extensive pleural adhesions and necrotic lesions. Two of the remaining control animals had lung scores of 4 including pleural adhesions as well as lung attachment to the diaphragm, 1 animal had a score of 3 with some necrosis and two animals had scores of 2. One animal in vaccine group A had a lung score of 4, 1 animal with a score of 3, 6 animals with a score of 2 and 2 animals with a score of 1. Three animals in vaccine group B had lung scores of 4, 3 with scores of 3, 3 with scores of 2 and 1 animal had a score of 1.

It was concluded that the vaccines prevented the acute form of pleuropneumonia and in addition, vaccine A demonstrated substantial protection from the pathological signs which characterize the chronic forms of the disease.

References: Pattison, I.H., D.C. Howell, and J. Elliot: J. Comp. Path. 67: 320-329, 1957; Rosendal, S., D.C. Carpenter, W.R. Mitchell, and M.R. Wilson: Can. Vet. J. 22: 34-35, 1981; Riising, H.J.: Proceedings, IPVS Congress, 1980.

*aparentemente los resultados son
buenos pero falta Htulación de
Acs. y ver si parte de la
protección no se debió al
desafío.*