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B.T. V. in Hog Cholera

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B.T.V. in Hog Cholera

Recent observations on tissue vaccine for immunization against hog cholera


HOG CHOLERA tissue vaccine is a product made under stringent regulation of the United States Bureau of Animal Industry, and distributed under license specifying “for field trial use by qualified veterinarians only.”

It consists of a eucalyptol-treated suspension of finely ground tissues from cholera-infected pigs. The virus is so modified by the treatment with eucalyptol that its effect upon the animal is no longer disease-producing, or even resistance-lowering, but solely anti-body-producing. This fact establishes at once: (1), that contact of vaccinated with unvaccinated animals is perfectly safe; (2), that pigs suffering from intercurrent infections are not subjected to the almost certainly fatal disturbances created by the introduction of unmodified virus into the bodies of such animals, and, therefore, death losses among them are no greater than would normally be expected, whether they received tissue vaccine or not; (3), that pigs treated with tissue vaccine need not be placed on reduced rations, and, consequently, “slowed up.” In a word, the advantages claimed for this vaccine are that it eliminates the spread of cholera and the so-called “breaks” due to secondary complications following virus injection, and it affords the pigs not only a better chance of reaching market but of reaching it earlier. At the same time, it fulfills its primary purpose of inducing a satisfactory immunity.

Hog cholera tissue vaccine will not, or is not, intended to take the place of anti-hog-cholera serum for the control of actual outbreaks. Following the administration of hog cholera tissue vaccine, a three week period is necessary for the development of immunity in treated animals and for this reason it can be used alone only for the immunization of pigs free from cholera and the vaccinated animals must be protected against cholera infection for three weeks following the immunization treatment.

For the development of a solid immunity against cholera, pigs should have been weaned for at least two weeks before they are vaccinated since it is known that suckling pigs do not develop a dependable immunity when vaccinated as sucklings. The dosage of hog cholera tissue vaccine is 5 cc. for pigs of all weights.

Recent Experiments

In a recent field experiment conducted on pigs receiving a single 5 cc. dose of vaccine administered by practicing veterinarians, 140 pigs were selected from 38 different farms. These pigs were exposed to cholera by injecting them with 2 cc. of virulent hog cholera virus at intervals varying from 30 to 368 days after vaccination. Of this total, ten pigs died presumably of hog cholera. Six of the deaths were in pigs from two farms and one each from four other farms. No trouble following administration of virus was observed in pigs from the remaining 32 farms.

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results obtained from this experiment indicated that a satisfactory immunity against hog cholera was conferred by treatment with the tissue vaccine which protected the vaccinated animals for periods of from 30 to 368 days and indicates that pigs vaccinated with one 5 cc. dose of tissue vaccine two or more weeks after weaning will have sufficient immunity to protect them against infection until they reach marketing age. If, at the time the vaccinated pigs are to be marketed, some are to be retained for breeding or other purposes, these animals should receive a second injection of 5 cc. of vaccine and be treated once a year thereafter with 5 cc. of vaccine. The site of injection of the vaccine for weanlings is usually the axillary space or the vaccine may be injected into the peritoneal cavity. When vaccinating heavy hogs, injections of vaccine are usually made into the neck muscles.

**Procedure**

The procedures to be followed for the immunization of pigs with tissue vaccine depend upon the kind and class of animals to be treated and in a general way are as follows:

Where feeder pigs are purchased and especially when purchases are made through sales yards, the newly purchased pigs should be isolated from other pigs on the farm for at least three weeks. If the newly purchased animals are known to have come from cholera-free premises, they may be isolated and observed for three weeks and if apparently healthy at the end of this period of observation, they may be treated with the usual dose of hog cholera vaccine. In cases where newly purchased pigs are obtained from sales yards or when they are thought to be exposed to cholera infection, a suitable dosage of anti-hog-cholera serum may be given and a 5 cc. dose of vaccine administered at the same time. Where this procedure is followed, a second injection of vaccine should be administered about 30 days after the serum-vaccine treatment. Recent experiments seem to show that pigs weighing up to 80 pounds develop some active immunity following the simultaneous use of 5 cc. of vaccine and 30 cc. of serum. However, a second injection of 5 cc. of vaccine should be given four to six weeks later.

The immunization of garbage-fed pigs with hog cholera tissue vaccine has not been extensively tried and there is not sufficient evidence at this time to determine whether or not garbage fed pigs can be satisfactorily immunized with the tissue vaccine.

**Precautions**

The procedures governing the use of tissue vaccine involve not only a knowledge of the conditions under which it may be used but also a knowledge and observance of aseptic precautions when using this product. To men carefully instructed in these essentials this statement may sound superfluous but many swine owners have come to the conclusion, and in some instances justly so, that they fear cholera less than their veterinarians. Some of the important precautions which must be observed when using tissue vaccine are to make sure that instruments, clothing and equipment used for serum-virus administration, or clothing or equipment contaminated with hog cholera virus from any source are not used when administering tissue vaccine. This precaution must be observed since if virus infection is introduced into the herd at the time tissue vaccine is used, losses will certainly follow as a period of three weeks must elapse following the use of the vaccine for the development of immunity. When injecting vaccine, the site of the injection should be disinfected with a dependable skin disinfectant such as tincture of iodine.

It is good practice, and this applies not only to the use of tissue vaccine for hog cholera immunization but to all immunization and diagnostic work, to make a point of wearing clean coveralls and overshoes and to use clean sterile instruments and plenty of good disinfectant. Operations should be performed as aseptically as possible and precautions taken to prevent the spread of the infection. On completion of ones’ work, outer clothing should be removed, instruments disinfected, and boots

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Dr. E. V. Beamer, '40, is leaving the Raritan Hospital for Animals, Inc., New Brunswick, N. J. Dr. Beamer plans on doing graduate work in nutrition.

Marriages

Dr. F. E. Bartley, '41, was married to Miss Veldeva Stoaks of Lennox, Iowa, on Jan. 17. Dr. Bartley, formerly located at Slater, Iowa, is now at Westboro, Mo.

On the eve of April 14, Miss Marney Scott, H.Ec.Sr. from Longview, Wash., announced her engagement to Dr. Melvin Beemer, '41, of Corning, Iowa.

Dr. R. J. Dundas, '40, of Waterloo, Iowa, was married to Miss Marie Holland of Scranton, Pa., on March 24 at the Central Christian Church in New York City.

Dr. Roy Price, '41, was married to Miss Gertrude Kingsberry at Davenport, Iowa, on April 4. Dr. and Mrs. Clifford Michelson, '41, were attendants at the wedding. Dr. Price is located at Monmouth, Ill.

Births

Dr. and Mrs. J. M. Higbee, '39, of Albert Lea, Minn., are the parents of a baby boy, who arrived around April 1.

Dr. and Mrs. Ralph Hawk, '40, of Clinton, Iowa, are the parents of a son, born March 17.

Dr. and Mrs. Paul Maland, '37, Charles City, Iowa, are the parents of a daughter, Judy Kays, born on December 11, 1941.

Other News

Dr. J. P. Jorgenson, '06, of Elkhorn, Iowa, is again attending his private practice after being ill for some time.

Veterinarians must make good mayors! Dr. Emery Enge, '32, is the new mayor of Comfry, Minn., while Dr. B. F. Schoneman, '32, has been elected the new mayor of Ellsworth, Minn.

Dr. D. L. Caswell, '37, who resides at 1126 S. Washington, Royal Oak, Mich., is operating a small animal hospital.

Dr. A. R. Menary, '10, of Cedar Rapids, Iowa, is chairman of the Iowa Veterinary Preparedness Committee of the Procurement and Assignment Service.

Dr. C. M. Day, '93, died on March 24.

Dr. C. G. Cole, '06, has been named head of the U. S. Government Experiment Station located at Ames, Iowa. Dr. Cole was in charge of anti-hog-cholera serum at the station for seven years. He succeeds Dr. C. N. McBryde, who is now retired.

Dr. Robert Short, '38, has completed his fourth year as head veterinarian of Dr. Bell's Small Animal Hospital at 2116 E. Colorado St., Pasadena, Calif.

Funeral services were held in Chicago, Ill., on April 8 for Dr. F. E. Schnell, '19, who died suddenly of a heart attack at his home in Chicago. Dr. Schnell had formerly operated a small animal hospital in Chicago.

Dr. G. G. Hartle, '38, has enlarged and remodeled his small animal hospital which is located at 5324 Lyndale Ave. So., Minneapolis, Minn.

Tissue Vaccine

(Continued from page 120)

or overshoes removed and thoroughly washed with disinfectant. These procedures are not only proper, but unquestionably tend to creat confidence in the veterinarian on the part of his client.

In addition to the proper administration of tissue vaccine for the immunization of swine against cholera, the veterinarian should instruct owners of swine as to the proper practices as regards husbandry and sanitation as they apply to the herds of their clients. It should be emphasized to owners that pigs purchased indiscriminately and particularly through sales yards are poor risks and they should be encouraged to build up their own herds.

The careful administration of tissue vaccine under proper conditions for its use will yield very satisfactory results in preventing losses from hog cholera. The administration of this product is in the hands of the practicing veterinarian and its intelligent successful use is a challenge to his ability as a practitioner.