analyses should be done on successive
days to establish a trend in serum levels
of calcium and phosphorus.

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Eperythrozoonosis In Swine

by

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and

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Eperythrozoonosis is an “acute febrile,
icteroanemic disease of shotes” caused
by the rickettsial organism Eperythrozoon
spp. There are two species which are
commonly associated with swine, E. suis,
which produces a febrile disease, and E.
parvum, which is innoxious. Other common
names for eperythrozoonosis include epy,
swine icteroanemia, yellow belly, and
anaplasmosis-like disease.

E. suis organisms are relatively large,
coccoid bodies (average size of 0.8u in
diameter) found attached to RBC’s and also
free in the plasma. Transmission of the
organism occurs via several methods: 1)
bloodsucking ectoparasites especially
mange (Sarcoptes scabei var suis) and lice
(Hematopinus suis), 2) mechanical trans­
mission (needles, ear notching, tail
docking, castration, etc.), and 3) in utero
transmission.

In utero transmission was shown to exist
by an experiment conducted by Dr. A. R.
Smith at the University of Illinois. A bred
gilt which had been serologically positive
(titer 40) for at least 5 months previously
was purchased and her pigs were delivered
via cesarian section (germ free). The pigs,
therefore, had no contact with the sow or
other infected pigs. Out of a litter of 13
pigs, parasites were observed in the blood
of all the pigs during the first week.
Wright-Giemsa stained blood smears were
made to confirm the infection. Three of the
13 died and all dead and moribund pigs had
hemoglobins of 1.9-3.0 g/100 ml. and
PCV’s of 10.5-12.5.^

Most parasites in swine don’t change the
blood picture much, E. suis being an ex­
ception. The total red count may drop as
low as 1-2 million cells/cubic mm. (normal
is 7 million cells/cubic mm.), thus creating
a severe anemia and icterus: Hemoglobin
levels decrease to 2-4 gm. (normal is 13
gm.) and the bone marrow becomes
hyperplastic while total white count in­
creases slightly or remains the same.

Incubation time for the disease is ap­
approximately 6-10 days. Increased tem­
perature of 104° to 107°, anorexia,
depression, and severe and rapid blood
destruction with a subsequent decrease in
the numbers of parasites are characteristic
clinical signs of epy. Later in the course of
the disease icterus, polypnea, weakness,
and bile stained feces are observed.

On posting a diseased animal, icterus,
yellow liver and a soft, enlarged spleen are

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common findings. Thin watery blood, ascites, a pale, flabby heart and hydropericardium are also often noted. Microscopically, hyperplastic bone marrow and hemosiderosis and centrilobular necrosis of the liver can be seen. The severe anemia associated with epy is due to R.E. hemolysis and auto-immune phagocytosis.

There are three main clinical forms of epy: 1) a form in which there are infertility problems such as abortions and/or weak pigs which often bleed from the navel, 2) a form which manifests itself just after the pigs are weaned. In this form the pigs go progressively downhill postweaning and become chronic “poor-doers” which are anemic and often develop a diarrhea terminating in death, and 3) the form most often described is the acute, febrile, icteroanemic disease of shoats. This form is less common than previously due to antibiotic feed additives.4

Diagnosis was formerly based on history and demonstration of the parasite in blood smears. The organism is often difficult to find on blood smears due to the fact that the number of parasites is on the decline by the time clinical signs are evident and, even so, many infections are subclinical in nature. For these reasons the indirect hemagglutination (IHA) test was developed. It is an improvement over the complement fixation (CF) test since it detects IgM while the latter detects only IgG. In the carrier state the IgG antibody may be effectively neutralized yielding negative results with the CF test. The IHA test has been shown to be a reliable test.5

The swine host can carry epy organisms for long periods without displaying clinical signs of the disease. The blood is extremely infectious to other swine even though it may be impossible to demonstrate the organism on blood smears.

Two commonly used treatments for epy are oxytetracycline at 3-5 mg./lb. and arsanilic acid at 360 gm./ton for five days (experimentally derived dose). Symptomatic treatment is also important and includes administration of sodium cacodylate, iron, and B-vitamins (indicated for anorexia). Of course, far better than cure is prevention which can be achieved by controlling lice and mange and also prevention of mechanical transmission of the organism.

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Pseudorabies In Cattle

by
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Pseudorabies (PR), or Aujeszky’s Disease is a disease caused by a Herpesvirus causing both apparent and inapparent infections in swine and causing disease in other species. In volume 37, 1975 no. 1 of the ISU Veterinarian, the disease was described as it has been seen in swine of various ages. The clinical cases described in that article were similar in some manifestations and different in others to cases seen in a recent PR outbreak near Hubbard, Iowa from February, 1974 and continuing to date. This epidemic has spread to 23 different farms causing a large economic loss. There have also been

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