

Manitoba

Colitis associated with *Treponema innocens* in pigs

In September 1987, 60 specific pathogen-free young pigs were transported to a cleaned and disinfected quarantined area on a local farm. Several of the pigs developed a transient, green-brown diarrhea after a feed change.

An autopsy, performed on one of the animals with more persistent diarrhea, revealed few visible lesions. The colon and cecum contained copious, green, frothy content. The mucosal surface was hyperemic in some areas. Histologically, the crypts were moderately hyperplastic. An increased number of mononuclear cells and leukocytes were present in the lamina propria. Areas beneath the epithelium were edematous and congested. Individual epithelial cells were necrotic, allowing bacteria to invade the lamina propria. Large numbers of spirochetes could be seen on hematoxylin and eosin stained sections forming a pseudo-brush border on the epithelial surface. In addition, special staining procedures revealed many organisms in the crypts and within goblet cells. *Balantidium coli* were also present in moderate numbers on the mucosal surface. No organisms resembling the morphology of *Campylobacter* were seen.

Scrapings from the colonic mucosa stained with Victoria blue 4R stain revealed large numbers of organisms resembling *Treponema*. In addition to routine bacteriology, specimens from the colon were also cultured on selective media for *Campylobacter* and *Treponema*. After 48 hours of anaerobic incubation the *Treponema* agar plates had heavy growth of flat, spreading, clear translucent colonies. These colonies produced weak beta-hemolysis. Stained smears

from the colonies revealed many spirochetes with typical characteristics of *Treponema*. Before further studies were conducted, a culture of this organism was sent to Dr. J. Kinyon of Iowa State University who determined that it was *Treponema innocens*.

The clinical syndrome responded to antibiotics but returned when therapy was discontinued. The condition was not controlled until the feed composition was changed. Our findings — clinical, pathological and microbiological — are similar to the previous reports from England (1-5).

Two other cases in unrelated herds have since been seen. This is the first time such a syndrome has been reported in Canada.

References

1. Duncan AL, Lysons RJ. Diagnosis of colitis in pigs. *Vet Rec* 1987; 121: 430.
2. Smith WJ, Nelson EP. Grower scour/non-specific colitis. *Vet Rec* 1987; 121: 334.
3. Taylor DJ, Estrada Correa A, Pradal Roa P. Grower scour and non-specific colitis. *Vet Rec* 1987; 121: 479-480.
4. Taylor DJ, Simmons JR, Laird HM. Production of diarrhea and dysentery in pigs by feeding pure cultures of a spirochaete differing from *Treponema hyodysenteriae*. *Vet Rec* 1980; 106: 326-332.
5. Wilkinson JD, Wood EN. Grower scour/non-specific colitis. *Vet Rec* 1987; 121: 406.

J. Grant Spearman, Gopi Nayar, Veterinary Services Branch, Manitoba Agriculture, Winnipeg R3T 2N2 and Michael Sheridan, Sheridan and Heuser Swine Health, Box 31, Steinbach, Manitoba R0A 2A0

Alberta

Rectal strictures in pigs

A 45 sow farrow-to-finish unit had experienced an increasing incidence of rectal strictures over a two year period. The syndrome affected pigs of both sexes when they were two to four months old. Five growers were affected in the month preceding the visit, with strictures approximately 5 cm inside the anus. Clinically affected pigs lost weight gradually, and the weight loss was accompanied by gradual distention of the abdomen. Affected individuals died within four to eight weeks of developing clinical signs.

Attempts to dilate strictures with probes and surgical correction methods are described in the literature. These procedures require heavy sedation or general anesthesia. Expense and limited success make these methods far from practical or economically feasible in a commercial operation.

Possible causes of rectal stricture include salmonellosis, mycotic organisms, trauma associated with a prolapsed rectum, and, in rare cases, peritonitis or polyserositis involving the blood vessels in the