Post mortem findings

In acute swine dysentery congestion and oedema is usually seen in the walls of the large intestine and the mesentery whose lymph nodes may be enlarged. The mucosa of the large intestine is usually swollen and covered in mucus and fibrin and the associated contents of the colon are watery. As the condition progresses the oedema can disappear and the mucosal lesions become more severe with the formation of muco-fibrinous pseudomembranes containing blood. As lesions become chronic they become covered with a dense fibrinous exudate.

Diagnosis of swine dysentery

Diagnosis is based on clinical and post mortem findings and demonstrating the causal organism. The demonstration of spirochetes in colonic smears is not diagnostic per se, as there are spirochetes other than Brachyspira hyodysenteriae in porcine colonic mucosa or faeces by culture or PCR. Serological screening of herds is possible, but rarely done.

Differential diagnosis

Proliferative enteropathy can be confused with swine dysentery but the latter does not affect the small intestine, while the former does. Salmonellosis can present a similar enteric picture but it often has mucoid lesions in the small intestine and haemorrhage or necrosis in other internal organs. Also, salmonellosis often has deep ulcerative lesions.

Trichuriasis can also look like swine dysentery except this condition will also have large numbers if the round worm Trichuris suis is in the large intestine.

Immunity

Although changes have been monitored in immunity levels their full significance is yet to be elucidated. Pigs that have recovered from swine dysentery are protected against a rechallenge for up to four months although some remain susceptible to reinfection.

Following experimental infection or vaccination there is some protection against serotypes of B. hyodysenteriae other than the one used for experimental infection or vaccination, suggesting that a degree of cross protection can occur between different serotypes.

Swine dysentery is rarely seen in suckling piglets suggesting maternal immunity exists.