
**Abstract**

Commonly used diagnostic techniques for edema disease in Kenya were tested for their sensitivity and specificity on 84 pig carcasses submitted to Department of Veterinary Pathology and Microbiology between June 2004 and June 2007. Clinical signs gathered from anamnesis, post-mortem lesions revealed at autopsy and *E. coli* isolated from intestinal contents and characterized using biochemical tests and polymerase chain reaction were compared using receiver-operating characteristic analyses. A combination of clinical signs, post-mortem findings and isolation of *E. coli* carrying F18 and shiga-toxin type II variant genes were used as gold standard test. Forty nine (58.3%) cases were diagnosed as edema disease, based on clinical signs and post-mortem findings. Of these, thirty eight (77.6%) had variable amounts of edema in various body sites and clinically, twenty six (53.1%) had neurological signs, 18 (36.7%) were found dead, 3 (6.1%) had swollen eyelids and 2 (4.1%) expressed respiratory distress. Hemolytic *E. coli* carrying the tested genes were isolated from thirty one (62.2%) of these cases. Presence of edema in various body cavities and observation of defined clinical signs had 75.3% and 57.4% sensitivity, respectively. Considered individually, the sensitivity was 64.7% for found dead, 50% for neurological signs and 84.4% for isolating hemolytic *E. coli*. All had a specificity of 81.3%. The results show that none of the diagnostic techniques had the expected 100% sensitivity and specificity, but isolation of hemolytic *E. coli* may be an important screening test for suspected edema disease cases.