## 10. 꽃사슴의 *Clostridium perfrigens* A형에 의한 장독혈증 발생 보고

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The case reports for *Clostridium perfringens* type A enterotoxemia in formosan deer have rarely been recorded. This paper describes a natural case of type A enterotoxemia in farmed formosan deer in Cheongwon gun. A dead, male 10-month-old formosan deer was submitted to Chungbuk Livestock and Veterinary Research Institute, March 24, 2001 and examined. That deer was fed with assorted grain feed, oak leaves, acom and bean curd. Grossly there was no visible external change. Despite of the carcass being examined within 12 hours of death, there was a quite degree of postmortem decomposition. There was severe hemorrhage in the serosa of abomasum and small intestine. Much blood tinged and watery contents were contained in those organs. Also there were severe swelling of spleen, some red foci in hepatic parenchyma. Microscopically there were severe congestion and hemorrhage in mucosa, submucosa, muscular layer, and serosa of abomasum and small intestine. Also spleen and pancreas showed severe congestion and hemorrhage.

There were multifocal hemorrhage with hepatic necrosis in periportal area and focal mononuclear cell deposition in sinusoid. In bacterial culture for small intestine, *Clostridium perfringens* was isolated. By toxin typing for the strain, that had alphatoxin belonged to type A. In electronmicroscopy for feces, no virus particle was detected. Considering clinical signs, gross lesions, microscopic lesions, bacterial culture, and toxin typing of the isolate, this case was diagnosed as enterotoxemia by *Clostridium perfringens* type A.

## 11. Detection of *Mycobacterium* species in cattle at slaughter houses using ELISA and multiplex PCR

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Tuberculosis, caused by *Mycobacterium* spp, induces chronic debilitating disease in all vertebrate. Tuberculosis is incurable and easily transmitted to the other animals, so that it is