

# B109 - HAEMORRHAGIC SEPTICAEMIA

**From:** AHP Disease Manual FAO [http://www.spc.int/lrd/ext/disease\\_manual\\_final/index.html](http://www.spc.int/lrd/ext/disease_manual_final/index.html)

## **Nature of the disease**

Haemorrhagic septicaemia (HS) is a contagious bacterial disease caused by two serotypes of *Pasteurella multocida*, B2 and E2. It affects cattle (*Bos taurus* and *B. indicus*) and water buffaloes (*Bubalus bubalis*) with a high mortality rate in infected animals. It is regarded as one of the most serious diseases of large ruminants in south east Asia.

## **Classification**

OIE List B disease

## **Susceptible species**

The water buffalo is the most susceptible species, followed by cattle.

## **Distribution**

HS occurs in South and South East Asia, the Middle East and most of Africa, the disease has also been reported to occur occasionally in Southern Europe.

## **Clinical signs**

Most cases are acute or peracute. The following signs are seen:

- High fever
- Depression
- Reluctance to move
- Salivation and nasal discharge
- Painful, oedematous swelling of the throat, extending to the brisket
- Congested mucous membranes
- Respiratory distress
- Calves may have a haemorrhagic gastro-enteritis
- Death in 6-48 hours after onset of clinical signs. Recovery is rare.

## **Post-mortem findings**

- Oedematous swellings of the throat-brisket contain a clear, straw-coloured serous fluid
- Blood-tinged fluid in body cavities
- Pharyngeal and cervical lymph nodes are swollen and congested
- Subserosal petechial haemorrhages
- Generalised congestion of the lungs

- Variable congestion of the abomasum and intestinal tract
- Calves may have haemorrhagic gastro-enteritis

Gross lesions will be minimal in animals that have died quickly.

### **Differential diagnosis**

- Blackleg
- Rinderpest
- Anthrax.

### **Specimens required for diagnosis**

The diagnosis is based on the isolation of *Pasteurella multocida*.

Heparinized blood from live animals or affected tissue from fresh post-mortem should be collected aseptically. Samples should be kept cool and shipped on wet ice as soon as possible. Swabs in transport media, ribs, and tips of ears are sometimes submitted from remote areas in developing countries.

### **Transmission**

HS is principally a disease of animals under stress. In endemic areas about 2% of healthy cattle and buffalo carry the organism in lymphatic tissue of the upper respiratory tract. Intermittently, even in the presence of circulating antibody, the organisms invade the nasopharynx and are excreted in nasal secretions. These episodes may be triggered by stress.

Infection is transmitted by:

- Direct contact between animals
- Contaminated feedstuffs or water

The bacterium does not survive in the environment for more than a few days.

### **Risk of introduction**

Because the organism survives poorly outside the host, it is unlikely that it would be introduced to a new area except by the introduction of live animals. N.B. healthy animals can carry the organism.

Restriction of imports of live animals from endemically infected countries, would keep the risk of introduction low.

### **Control / vaccines**

In endemically infected areas, annual immunisation using adjuvant vaccines gives good control. Whether HS can be eradicated from an area by comprehensive vaccination campaigns is unclear.

### **References**

- GEERING WA, FORMAN AJ, NUNN MJ, Exotic Diseases of Animals, Aust Gov Publishing Service, Canberra, 1995, p330-334
- Office International des Epizooties, 2002