BRAXY

Braxy is an acute infectious disease of sheep in Britain characterized by inflammation of the abomasal wall, toxemia, and a high mortality rate.

The disease was common in the early 20th century but now is extremely rare, as reflected in reports by the British Veterinary Laboratories Agency (Veterinary Investigation Centres) .

ETIOLOGY

*Clostridium septicum*, the common cause of malignant edema in animals, is generally regarded as the causative bacterium.

EPIDEMIOLOGY

The disease occurs only in midwinter when there are heavy frosts and snow, and usually only in weaner and yearling sheep. It has occurred in experimental sheep receiving infusions of acetic acid into the abomasum. These were thought to cause abomasitis. Adult animals in an enzootic area appear to have acquired immunity.

 *C. septicum* is a soil-borne organism and in many areas can be considered as a normal inhabitant of the ovine intestinal tract. The disease occurs in the UK and various parts of Europe and has been reported in the southern part of Australia , but appears to be rare in North America. It is now not of major importance because of its low incidence, although at one time it was sufficiently common to be an important cause of loss in some countries. In affected sheep the case fatality rate is usually about 50% and in enzootic areas an annual loss of 8% has been reported.

PATHOGENESIS

Presumably a primary abomasitis, associated with the ingestion of frozen grass or other feed, permits invasion by C. septicum, resulting in a fatal toxemia.

**CLINICAL FINDINGS**

1-There is a sudden onset of illness with segregation from the group, complete anorexia, depression, and high fever (42°C (107°F) or more).

2-The abdomen may be distended with gas and there may be signs of abdominal pain.

3-The sheep becomes recumbent, comatose and dies within a few hours of first becoming ill.

**NECROPSY FINDINGS**

1-There are localized areas of edema, congestion, necrosis, and ulceration of the abomasal wall.

2-Congestion of the mucosa of the small intestine may also be present and there may be a few subepicardial petechiae.

3- can be isolated of *C. septicum* by smear from the cut surface of the abomasal wall or by culture from the heart, blood, and other organs of fresh carcasses.

4-Bacteriological examinations of tissues must be carried out within an hour of death if the diagnosis is to be confirmed.

**Samples for confirmation of diagnosis**

1- Bacteriology - frozen abomasum, in air-tight container; four air-dried impression smears from freshly cut surface of abomasal mucosa (anaerobic CULT, FAT)

2-Histology - fixed abomasum.

DIFFERENTIAL DIAGNOSIS

Clinically the diagnosis of braxy is most difficult. At necropsy the lesions of abomasitis are characteristic, especially if the disease occurs under conditions of severe cold. Overeating on grain may cause local patches of rumenitis and reticulitis but there are no lesions in the abomasum. Braxy may resemble

infectious necrotic hepatitis but there are no liver lesions in braxy. The final diagnosis depends on isolation of *C. septicum* from typical alimentary tract lesions.

**TREATM ENT**

No treatment has been found to be of value.

**CONTROL**

Management of the flock is important. The sheep should be yarded at night, and fed hay before being let out to the frosted pasture each morning. Vaccination with a formalin -killed whole culture of *C. septicum*, preferably 2 injections 2 weeks apart, is also an effective preventive.