Calf Diphtheria (Necrobacillosis)

What is calf diphtheria?

There are two forms of calf diphtheria. The most common is an acute oral (mouth) infection, usually seen in calves less than 3 months old. The second form is usually seen in older calves and affects the larynx (or voice-box). Both forms are caused by the bacteria *Fusobacterium necrophorum*, which also causes foul-in-the foot and liver abscesses in older cattle.

Clinical Signs

**Oral form**
- Initial presenting sign may just be a swollen cheek
- Calf may be otherwise bright and active with no temperature
- Examination of the inside of the mouth shows a foul-smelling ulceration and swelling of the cheek
- Temperature may be normal at the start
  If untreated more signs develop:
  - High temperature
  - Coughing
  - Loss of appetite and depression
  - Difficulty breathing, chewing and swallowing
  - Swollen pharyngeal region
  - Deep ulcers on the tongue, palate, and inside of cheeks
  - Pneumonia

Usually only a few calves in a batch are infected though outbreaks can occur where hygiene is poor

**Laryngeal form:**
- Coughing: Moist and painful
- High temperature
- Loss of appetite and depression
- Difficult breathing, chewing and swallowing
- Pneumonia

Diagnosis

- The diagnosis of calf diphtheria is usually based on the clinical signs.
- For one-off cases rule out other problems such as BVD and foreign bodies by getting your vet to do a thorough oral examination
- Bacteriology can be also useful.
A post-mortem can confirm the ulcerative nature of the disease, particularly in calves with the laryngeal form.

**Treatment**

- Early prompt treatment is important as early treatment is much more effective
- Separate the infected animals and isolate them
- Antibiotics and painkillers are effective in most cases
- The laryngeal form is much more resistant to treatment. Get veterinary advice

**Prevention**

*Fusobacterium necrophorum* is a normal inhabitant of cattle intestines and the environment. Under unhygienic conditions, infection may be spread on feeding troughs and dirty milk buckets. Some of the contributory factors for occurrence of this disease include abrasions in the oral mucosa (such as those from erupting molar teeth), poor nutrition and the presence of other diseases present in young calves.

If animals are closely confined, the spread of this infectious disease can be prevented by thoroughly cleaning and disinfecting of all calf feeders. Young calves must be examined daily to identify early stages of the disease.

*Richard Laven BVetMed PhD MRCVS*

**Copyright © NADIS 2003**

The Meat and Livestock Commission is a sponsor of NADIS (National Animal Disease Information Service), which is a network of 40 veterinary practices and 6 veterinary colleges monitoring diseases in cattle, sheep and pigs in the UK.