



Livestock Notifiable Disease Factsheets Anthrax

If you suspect signs of any notifiable disease, you must immediately notify a Defra Divisional Veterinary Manager.

Anthrax

Anthrax is an acute, and generally fatal, disease caused by a germ known as the *Bacillus anthracis*. Human beings and all species of animals are liable to contract it. As a rule, cattle are the farm animals most frequently affected in Great Britain. At times, however, there may be more outbreaks in pigs than in cattle.

Symptoms

Among cattle and sheep, the period of illness is often so short that the affected animals may be found dead without signs of illness having been noticed. Nevertheless, anthrax is not always rapidly fatal to cattle and sheep, and an affected animal may be ill for several days before death occurs. Any of the following symptoms may be observed: high temperature, shivering and twitching, harsh dry coat, fits, bright staring eyes, colicky pains, dejection, refusal of food, and marked decrease or complete loss of milk. Occasionally a small trickle of blood from the nostrils is visible and there may also be blood in the dung.

In pigs and horses the disease is usually fatal, though less quickly than in cattle. In both of these animals a hot, painful swelling in the regions of the throat may be present, but the absence of such a swelling does not rule out the possibility that death may have been due to anthrax. In horses, symptoms of acute colic are frequently seen. Pigs may simply go off their food for a day or so, but the variation in symptoms they show is very great indeed. Any sudden or unaccountable death in farm stock should always raise suspicion of anthrax.

When a fatal case of anthrax occurs in a herd of cattle, it frequently happens that some of the other animals have a latent infection and recover. Such cases can be detected by taking the temperatures of all the cattle morning and evening for a week following the outbreak. It is not uncommon for pigs to be visibly sick for a few days and recover completely. If these animals are subjected to severe strain, for example farrowing during the weeks following the attack, they may relapse and die.

Post-mortem appearances

The unopened carcasses may be swollen and blood may ooze from the nostrils or other natural openings of the body. These conditions, however, are not always present and their absence does not indicate that the case is not anthrax.

It is most important to remember that the carcass of a diseased or suspected animal must not be opened. In cases of sudden unexplained death, farmers should await veterinary opinion before disposing of the carcasses. If, however, a carcass is opened by accident, whether in a knacker, a slaughterhouse or on a farm, the following conditions may be present:

- the lungs and the lymph glands are congested. Dressed carcasses appear ill-bled and fevered. The spleen is often enlarged, especially in cattle and sheep; it is softer and darker than normal, and its substance may resemble soft tar;
- The intestines may be inflamed.
- Pigs may show a marked swelling of the throat and patches of inflammation in the bowel wall: sometimes there is a dark or paler red swelling of the diaphragm, usually associated with an excess of blood-stained fluid in the belly cavity. The spleen may be normal, or there may be dark red nodular areas slightly raised above the surface;
- Horses may show a marked swelling of the throat or the breast, but the spleen may be normal.

Precautions

The flesh, blood, offals and discharges from an anthrax- infected carcass are full of anthrax germs, and thus dangerous to animals and humans.

Consequently, an ailing animal to which the slightest suspicion might be attached must not be killed and bled. It should be isolated and the police informed. Similarly, when an animal is found dead under suspicious circumstances, it should not be moved, skinned, or in any way cut or opened. Animals, vermin and poultry must be kept away from it and the police informed. Any blood, which may have escaped from the body, should be immediately and thoroughly mixed with a large excess of a Defra approved disinfectant. This will destroy the anthrax organisms before they have time to form spores. This is most important as spores are very resistant to all destructive elements and may survive for years, constituting a continuing danger to livestock.

Animals that have been in contact with a suspected animal should be watched carefully and isolated at once if they show similar symptoms. This is particularly necessary if cows in milk are affected. This milk may on rare occasions contain anthrax bacilli and thus could infect human beings.

Treatment

Treatment is seldom possible for animals infected with anthrax because of the rapid and fatal course of the disease once symptoms become apparent. However, if time permits, antibiotic drugs may be used with good effect. If animals are likely to be continually exposed to infection, for example by grazing over infected pastures, vaccination with anthrax spore vaccine is recommended.

This vaccine is safe to use and protects the animals for six months or more. Animals remain in a susceptible state, however, for about ten days after vaccination, and should be isolated as far as possible from contact with possible sources of infection during this period.

When the circumstances appear to warrant treatment with antibiotics or vaccine, a veterinary surgeon should be consulted.

Legislation

The Anthrax Order of 1991 as amended revoked and replaced the Anthrax Order of 1938. The 1991 Order includes anthrax as a notifiable disease under the Animal Health Act, and any suspicion of the disease must be notified to the Defra Divisional Veterinary Manager. The Order also provides for a veterinary inquiry as to the existence of disease, and the action to be taken in confirmed cases including the rules to be observed in an infected place.

Movement of animals is controlled. The local authority has powers to dispose of carcass by incineration on the infected place or by such other means as the Divisional Veterinary

Manager may approve. Owners are not entitled to compensation, but the local authority pays for the destruction of the carcasses. The Order also lays down rules for vaccination of animals and for cleansing and disinfection of infected premises.

Infection in man

Anthrax may cause a raised boil-like lesion on the skin which develops a black centre, from which the name anthrax, meaning coal, derives. Woolsorter's Disease used, historically, to be caused by inhaling spores from wool from infected carcasses and is often fatal. Normally, the skin infection responds to early treatment with appropriate antibiotics.

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