



Livestock Notifiable Disease

Factsheets

Lumpy Skin Disease

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

Animals affected

Cattle and Water Buffalo.

Definition

This disease, caused by a pox virus, is an infectious, eruptive and occasionally fatal disease of cattle characterised by nodules on the skin. Cattle and water buffalo are the only livestock species affected, with high morbidity rates but low (around 1 per cent) mortality. Death rates are greater among calves. It causes damage to hides, loss of milk and beef production, abortions in females and sterility in males.

Other names for this condition are: Dermatitis nodularis; exanthema nodularis bovis; pseudo urticaria; lumpy disease; knowpvelsiekte.

History and spread of the disease

Traditionally, this disease has been a serious problem in southern and eastern Africa, and more recently has extended northwards through sub-Saharan West Africa. In 2001 Lumpy skin disease was recorded in Mauritius, Mozambique and Senegal. It has never occurred in Great Britain.

Clinical signs

The incubation varies from five to twenty-eight days in natural conditions. Biting flies and mosquitoes probably transmit the virus, although spread of the disease is often related to cattle movements. Milk yield is decreased, temperature rises, and ten days later nodules or lumps appear on the skin, initially circular, flat and firm. These are raised about 3mm above the skin and are up to 0.7 mm in diameter, and can occur all over the body. The hair raises on the nodules. The udder or testicles are swollen and tender. Yellowish-grey lesions occur on the tongue, on the cheeks on the hard palate and gums and in the nostrils. There is salivation and nasal discharge. The penis and prepuce, or the vagina and vestibule may be affected. The superficial lymph nodes are swollen, and there may be oedema of the limbs. Also there is subcutaneous swelling of the brisket and abdominal wall. Cellulitis and sloughing of large areas of skin occur. Sterility in bulls and abortion in cows may occur, and the disease can affect almost all organs. There are nodules in lungs at post-mortem examination. Bronchopneumonia may be present. Haemorrhages may occur in the spleen or the liver and rumen. Raised nodules may occur on the mucous membrane of the three stomachs. Ulcers form in the abomasum, as well as inflammation and haemorrhages in the intestines. The swollen skin nodules may separate from the healthy skin and dry and harden to form a "sitfast". If shed, an ulcerative nodule remains.

Differential Diagnosis

Lumpy skin disease should not be confused with pseudo lumpy skin disease, which is a milder form of disease caused by a herpesvirus. Differentiation depends on isolation of the animal and identification of the virus. Histological and ultrastructural examination of nodules may be helpful. Lumpy skin disease could also be confused with other diseases such as Skin tuberculosis, urticaria, bovine lymphangitis, cowpox, mycotic dermatitis, photosensitization, severe infestations with demodectic mange, other manges.

Great Britain Legislation

Lumpy skin disease is included in the Specified Diseases (Notification and Slaughter) Order 1992 and the Specified Diseases (Notification) Order 1996, making suspicion of this disease compulsorily notifiable.

EU Legislation

Council Directive 82/894 made this disease compulsorily notifiable throughout the European Community.

Lumpy skin disease is subject to the provisions of Directive 92/119. Affected animals would have to be slaughtered, and a 3km protection zone and 10 kilometre surveillance zone set up around the infected premises.

After cleansing and disinfection the restrictions would remain in force for at least 28 days, this being the assumed maximum incubation period of this disease.

Pictures of the disease



Cow infected with Lumpy Skin Disease



Various sized cutaneous nodules in a severe case of lumpy skin disease.



Cut surface of the nodules in the parenchyma of the lung & interlobular edema.

Information current of June 16, 2005