

Foot and Mouth Disease in Calves

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Most commercial livestock owners are aware of Foot and Mouth Disease (FMD) due to all the publicity from the devastating outbreak in the UK a few years ago. FMD is a highly contagious disease that can spread rapidly from herd to herd. The disease is characterized by blisters and ulcers on the mouth, tongue, nose, teats and feet. While only a few animals die from FMD (<5%), many must be slaughtered to control the disease. Even without depopulation, many FMD-recovered animals would be culled due to poor production, lost weight, lameness, or mastitis. People in the livestock business know that the economic impact of FMD goes far beyond the lost of cattle. The purpose of this article is to contrast the disease in adult livestock with that mostly seen in young cattle.

In adult cattle the disease is characterized by vesicles or blisters and ulcers on the lips, gums tongue, dental pad, teats and feet (Picture 1). Animals often appear to be salivating with great amounts of fluid coming from their mouths. Affected adult animals are often lame with vesicles seen along the coronary groove of the hoof and in the interdigital space.

In calves less than 7-10 days of age, FMD produces high mortality. Often these young calves die quickly and never develop the characteristic blister lesions seen in mature cattle. In fact, many calves die without any clinical signs of disease. The primary lesions in these young animals at necropsy are found in the heart (Picture 2). The lesions are that of myocarditis or inflammation of the heart with necrosis and may cause the heart to appear like “strips on a tiger”. Without a thorough examination by a trained veterinary pathologist, no certain diagnosis could be made. In older calves, the animals may develop small vesicles or ulcers on the tongue, dental pad, lips or nose. These are often not as pronounce as in adult cattle as the calves are eating primarily liquid feeds compared to the roughages and grains of the older cattle. Also since these animals are lighter in weight they often do not develop vesicles in the interdigital space or around the coronary band and do not become lame as seen in older animals. In older weaned animals the classical oral and feet lesions would be seen.

Dairymen who raise their own calves or owners of calf ranches may not identify FMD in calves and mistake the lesions for other diseases that are common on most dairy's or calf ranches such as Bovine Papular Stomatitis (Picture 3). We must all be vigilant for the early signs of all foreign animal disease especially FMD. Early detection and confirmation may prevent an economically devastating disease outbreak that could cripple the cattle industries.

Picture 1. Characteristic blister lesions seen with vesicular diseases like Foot and Mouth Disease. (Photo USDA)



Picture 2. “Tiger strip” lesions seen in the heart muscle of young calves infected with Foot and Mouth Disease. (Photo USDA)



Picture 3. Lesions of Bovine Papular Stomatitis. Note similarity to FMD, however, there are no blisters or vesicles with Papular Stomatitis.

