

Maryland Horse Industry Board



INFORMATION ABOUT EQUINE STRANGLES

by James Fearer, D.V.M.

Maryland Department of Agriculture

Several licensed stable operators in Maryland have recently asked the Maryland Horse Industry Board Stable Inspectors about the disease commonly known as strangles. As a result, the Animal Health Unit in the Maryland Department of Agriculture is releasing the following response.

Although not a reportable disease in Maryland, equine strangles is, nevertheless, a serious malady. It is an infectious, transmissible disease found worldwide and characterized by inflammation of the upper respiratory tract and most often by abscessation of the adjacent lymph nodes. The condition may occur in horses of all ages, although those under five years of age are probably more susceptible and therefore, more frequently affected by serious forms of the disease.

The principle agent involved is a bacteria, *Streptococcus equi*, and, although more resistant to heat than other members of the streptococcal group, this resistance is not excessive. It is killed in the environment by drying, sunlight and common disinfectants. It is more resistant to disinfectants and drying when contained in organic material.

It is transmitted through the purulent discharges of infected animals. Infection is by inhalation or ingestion, followed by invasion of the upper respiratory and throat mucosa in which enzymes and toxins are released by the organisms inducing inflammation. The bacteria then spread to the local lymph nodes which cause further inflammation and abscess formation.

After exposure, the incubation period is three to six days. An infected horse will usually first go off feed and develop a fever which may go up to 106°F. Inflammation then develops in the throat and upper respiratory linings which may cause difficulty in swallowing. A nasal discharge will develop and become very pussy and a cough usually becomes prominent. There also may be a discharge from the eyes. Most of the lymph nodes in the throat and upper neck become involved and often abscess to the point of rupturing. The swelling of these lymph nodes may be sufficient to result in serious and often life-threatening respiratory obstruction. This is the clinical feature which gives rise to the name strangles. "Bastard Strangles"

is characterized by abscessation in other areas of the body, particularly of the lymph nodes in the abdomen and less frequently the thorax. If an outbreak occurs in a native population, those affected may approach 100 percent. The death rate is usually less than two percent and may result from complications caused by the disease.

Treatment requires complete rest and nursing care. Hot packs over the abscesses may speed their maturation so that they may be lanced. The use of antibiotics is controversial, although *S. equi* is sensitive to penicillin, sulfamethazine and trimethoprim-sulfadiazine. Nursing foals should probably receive antibiotic therapy as should animals with severe, acute cases.

During an outbreak, sound sanitary measures should be taken to prevent spread of infection. Common watering troughs should not be used. Affected animals should be isolated, and their temperatures monitored. Stables and equipment should be cleaned, contaminated bedding burned or composted, and facilities not used for about four weeks. Mild antiseptic washes can be used to remove crusted discharges about the head. It is important to remember that affected animals can be infectious for more than four weeks after onset. Horses frequently continue to shed the bacteria for at least four weeks after

clinical signs resolve. A chronic, convalescent carrier state can exist in which the organism persists in guttural pouches.

Because the bacteria can be shed for long periods, prevention depends heavily on isolating horses added to a herd or stable for several weeks before mingling. Any suspect animals should be examined and a bacterial culture done on any nasal discharges. Colorado State University Veterinary School is developing a new test to determine a horse's level of exposure and is aimed to be fast and simple. It will be an enzyme-linked immunosorbant assay (ELISA) test and will show risk level by assessing the animal's blood antibody titer. A low titer would indicate the horse would have a high risk level if exposed to the disease. Armed with this information, owners could make intelligent decisions involving the horses' health.

In the U.S., three vaccines are currently available. While vaccination does not always prevent infection, if an infection does occur after vaccination it is usually milder. Any questions about strangles or any other equine medical-related information should

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