Contributions

Rain Rot: What Can I Do? H. Steve Conboy, DVM

Rain rot is caused by the fungal organism Dermatophilus congolensis. Other names of the disease are rain scald and streptothricosis. Contrary to what a lot of people think, the organism has not been demonstrated to proliferate or be present in dirt or soil. The organism is dependent on a carrier horse who has the organism on its skin, and who may or may not be affected by it. There is some natural immunity, but some horses seem to be more susceptible to it, and that's why some horses get it year after year.
In order for a horse to get the disease, several conditions have to exist. You have to have an infected carrier animal, or a fomite such as a brush, blanket, or saddle that has the organism in the form of a spore that makes contact with the susceptible horse. There has to be some form of extreme moisture, like heavy rainfall. Horses that have heavy hair coats keep the moisture in contact with their skin, which helps the spores grow. And, the skin has to be damaged -from an insect bite, cut, or scrape. That lets the organism get down into the epidermis.
This is somewhat a self-limiting disease. The horse will probably get over the problem as it sheds its hair coat. The organism is considered an aerobe or a facultative aerobe. That means it prefers carbon dioxide or a lack of oxygen to grow. So, you need to get rid of the heavy hair coat and the scab that's holding the organism into the skin.
The first thing we do is use a soap - like an iodine soap -that lathers good and work the crust off that's created by serum oozing out through the skin. With gloves on, lather the horse good and try to break the scabs off, which is painful to the horse. Getting the scabs off and letting the air get to the ulcerated areas is the most important part, and it is the most difficult because the horse resists it. Since it is painful, sometimes it takes a couple of days working a little at a time.
Then, any kind of antiseptic is successful in killing the fungus. The one that we prefer to use is a mixture of lime and sulfur. It is made in a ratio of one part lime and sulfur to eight parts water. If you use it any stronger, it can blister the skin. The product is a fungicide that's used on plants like roses, so you can get it in a garden store. It's very effective, but the downside is that it has a very bad sulfur odor.
Other things that can be used are povidone-iodine (Betadine), Chlorhexadine, and phenol. Any one of them should be applied daily for five days.
There are complicating factors occasionally Because this disease causes a moist, warm environment, it's a good place for a secondary bacterial infection like staph, strep, or Rhodococcus. The case can be more difficult to treat, and it might require systemic antibiotics. The Dermatophilus organism itself if very susceptible to penicillin, so your veterinarian may prescribe that for severe cases.
The best way to prevent spread of the disease is to use some form of disinfectant for brushes (like Clorox) and wash your hands thoroughly after working with an infected horse. Blankets shouldn't be used between horses, but if they are, they should be washed and disinfected before being used on another horse. Also, if the horse you're treating is blanketed, make sure to wash his blanket to prevent re-infection.
It is important to disinfect anything you use on an infected horse before using it on another horse - halters, saddle pads, brushes. Even if the horse has a favorite place he rubs, like a stall door or fence, it can become a source of the organism.
Diagnosis is usually by clinical signs, and the disease can manifest itself in several ways. It can result in rather large, crusty, circular areas. It can also be in small, raised areas with small scabs (less than 1/4 inch). When it's like that, there will be a mass of raised hair all over the horse's back. In either case, there is a crust of serum that elevates the hair. As the disease progresses, the crust may increase to a quarter of an inch thick.
The disease is not usually associated with any discomfort or itching except when you remove the scab, which is painful. When you remove the scab, the skin underneath might be gray and healing, or pink and oozing.

To make a specific diagnosis, which we usually don't do, the organism can be identified under the microscope by taking some the exudate and staining it with New Methylene Blue, Diff-Quick, or gram stain. It is a gram-positive organism that is branching and may divide into cocci chains that look like railroad tracks. It also can be cultured in blood augar, and the culture can be more successful if you use 20% CO 2 in the culture technique.

When the fungus appears around the back of the fetlock, it's known as greased heels or dew poisoning. Again, it's caused by the horse standing in water, or by excessive dew on the grass that keeps the feet wet. It's almost always associated at the fetlock with white skin, not dark skin.

The organism can cause problems anywhere on the horse's body, although the most common place is on the back. Other areas are around the eye and lip margins and at the tips of the ears - areas that are exposed to trauma.

Most veterinarians don't recommend using ointment on any areas but the pasterns because it holds moisture into the skin. If you use an ointment on the pasterns, such as Desitin or an anti-fungal, you have to get rid of the scab so the medication can get to the organism and hold the water away from the skin.

- Written by H. Steve Conboy, DVM
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