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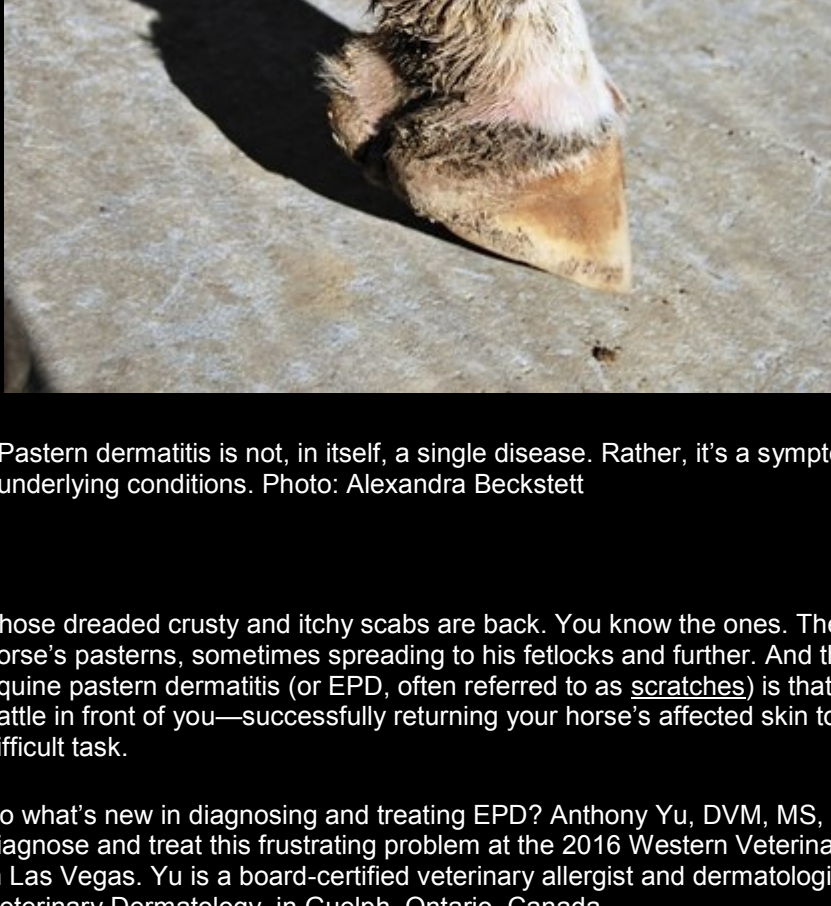
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What's New in Treating Pastern Dermatitis "Scratches"



Pastern dermatitis is not, in itself, a single disease. Rather, it's a symptom of a variety of underlying conditions. Photo: Alexandra Beckstett

Those dreaded crusty and itchy scabs are back. You know the ones. They cover the back of your horse's pasterns, sometimes spreading to his fetlocks and further. And the worst part of this so-called equine pastern dermatitis (or EPD, often referred to as scratches) is that you know you have an uphill battle in front of you—successfully returning your horse's affected skin to health is a notoriously difficult task.

So what's new in diagnosing and treating EPD? Anthony Yu, DVM, MS, Dipl. ACVD, reviewed how to diagnose and treat this frustrating problem at the 2016 Western Veterinary Conference, held in March in Las Vegas. Yu is a board-certified veterinary allergist and dermatologist and owns Yu of Guelph Veterinary Dermatology, in Guelph, Ontario, Canada.

One key thing to remember about EPD, Yu said, is that it is not, in itself, a single disease. Rather, it's a symptom of a variety of underlying conditions. As such, accurately diagnosing which condition your horse is afflicted with is essential to prescribing the proper treatment.

And, he added, "to achieve a positive therapeutic outcome, treating the predisposing and perpetuating factors is just as important as addressing the primary cause of EPD." In short, it's a complex process.

What Does It Look Like?

Pastern dermatitis isn't fussy about what kind of horse or pony it affects—equids of all breeds, sexes, and sizes can develop the condition. However, Yu said, horses with feathers are more commonly affected, as are adult horses compared to foals, and hind limbs are more likely to be affected than forelimbs. Lesions develop more frequently on white areas of the lower limbs, but develop on pigmented skin, as well. Left untreated, said Yu, lesions could spread from the back of the pastern (the most commonly affected area) to the front of the pastern and fetlock.

Clinical signs vary depending on the cause of EPD, but often include edema (lower limb fluid swelling), erythema (reddening of the skin), and scaling, which can progress to exudation (oozing scabs), hair-matting, crusting, fissures, and thickened skin. Ulcers and secondary bacterial infection can also develop in some cases.

Under the EPD umbrella, Yu described three different presentations with more specific clinical signs:

- **Scratches**, the mildest and most prevalent form, presents with alopecia (hair loss), dry scales, and crusts and can be itchy and/or painful;
- **Grease heel**, the exudative and more complicated form of EPD, often develops erythema, erosion (a superficial condition in which the epidermis, or outermost skin layer, essentially is stripped away), alopecia, crusting skin inflammation, epidermolysis (blistering), and vasculitis (inflammation of the blood vessels); and
- **Grapes**, the chronic proliferative and most severe form, is associated with hyperplasia (thickening of skin), hyperkeratosis (scaling), lichenification (leathery skin), fissures, and nodules.

Yu said the latter two forms are common in affected draft horses.

How Do You Diagnose It?

As Yu mentioned, it's critical to determine what you are dealing with before beginning treatment. He said a veterinarian starts the diagnostic process by collecting a thorough history. Be prepared to tell him or her:

- When the condition appeared, specifically the month in which it developed;
- How old the horse was at disease onset;
- Whether it's a seasonal condition;
- If the horse appears itchy in the affected or other areas;
- Whether you've applied any topical products or administered any systemic medications to treat the condition and the ingredients, dose, frequency, duration, and whether the clinical signs improved or deteriorated; and
- What kind of environment the horse lives in (i.e., type of bedding, whether his pasture is muddy, etc.).

Based on the horse's history and physical examination, the veterinarian might have an idea of what's behind the EPD. If not, or to confirm a diagnosis, he or she can choose from several diagnostic tests, including examining skin scrapings for ectoparasites; evaluating hair from the affected area; performing skin cytology to look for infectious organisms, acantholytic cells, or cancer cells; collecting a skin biopsy for histopathology or culture; and genetic testing.

What Causes It?

As mentioned, many conditions can result in EPD. Through the diagnostic work-up, your veterinarian might find a number of issues, including:

- **Chronic progressive lymphedema (CPL)**—This condition, more common in draft horses than in lighter breeds, typically occurs when there is a defective elastin network associated with the lymphatic system. Yu said the condition results in lower limb edema and skin thickening, resulting in secondary microbial or parasitic (caused, for example, by *Malassezia*—a type of yeast—or *Chorioptes*—a species of skin mite) infections and lameness due to the swelling in the affected limb. Generally, he added, CPL doesn't respond well to therapy. But researchers have begun studying new treatment methods, including combined decongestive therapy and a "horse Jacuzzi" to keep the legs clean, disinfected, and massaged. Horse owners can also administer some medications, Yu said, as a cost-effective palliative treatment.
- **Pastern leukocytoclastic vasculitis (PLV)**—Ultraviolet (UV) light exacerbates this challenging immune-mediated condition. PLV results in swelling, redness, and raw and/or crusty skin lesions in the pastern area. The condition is characterized by immune-mediated damage to blood vessel walls, resulting in the clinical lesions.
- **Contact, irritant, or allergic dermatitis**—Allergic dermatitis (simply, inflammation of the skin caused by an irritating stimulus) is a common yet treatable and manageable problem in horses. It can resolve if the irritant can be identified and removed. Otherwise, Yu said, long-term management with allergen-specific immunotherapy can essentially teach the horse's immune system to not overreact to common environmental allergens such as mold, dust mites, insect allergens, and pollens from trees, grasses, and weeds.

- **Pastern folliculitis**—One of the most common causes of EPD, pastern folliculitis (an infection of the hair follicles) can result from either a bacterial infection typically caused by *Staphylococcus* spp and *Dermatophilus congolensis* or dermatophytosis (a fungal disease commonly referred to as ringworm), both typified by circular patches of hair loss, reddening, scaling, crusting, and itching.

- **Chorioptic mange**—Common in draft breeds and caused by the skin mite *Chorioptes bovis*, this condition is characterized by lesions that start as extremely pruritic (itchy) dermatitis affecting the distal limbs around the feathered fetlocks and extending up the legs. Papules followed by alopecia, crusting, and thickening of the skin result from the horse rubbing and scratching itself on any hard surface it can find. Yu cautioned that asymptomatic carriers within a barn can carry the mite, but show no outward signs of infestation. Therefore, when treating an infected horse, it's important to treat all in-contact horses along with their environment to eliminate the infestation.

Photosensitization—Photosensitization is a serious skin condition characterized by "sunburned," crusty skin that dies and sloughs away. It is usually caused by either a reaction to something the horse has eaten or severe liver disease rendering the horse unable to process photo-inducing agents in his body. The skin problem does not appear until the animal is exposed to UV light.

The Big Question: How Do I Treat It?

"Choosing the appropriate therapy involves the recognition and identification of all predisposing, perpetuating, and primary factors," Yu said.

Yu recommended several easy steps owners can take to help an affected horse's condition:

- Ensure your horse's legs stay dry in wet weather by keeping him in a clean, dry stall. Also, keep him stabled until the morning dew dries;
 - Try different types of bedding if your veterinarian suspects a contact allergy;
 - If possible, clip feathers and/or long hair at the back of the fetlock to keep moisture from building up and perpetuating EPD;
 - If your horse is diagnosed with photosensitivity, avoid UV light exposure. Keep him stabled during the day (about 10 a.m. to 4 p.m., depending on where you live) or equip him with horse clothing (such as leg wraps, blankets, and fly masks) with UV protection;
 - If your horse is still in work, wash the affected area before sweat dries with an antiseptic shampoo (e.g., accelerated hydrogen peroxide [Yu recommended Pure Oxygen by Ogena Solutions]) to keep the area clean;
 - Use caution when exercising a horse with lesions in the saddle area. If the horse must be worked, Yu recommended applying a barrier cream or placing a clean, dry towel between the lesion and the saddle pad; and
 - Wash sheets or blankets regularly to ensure the lesions don't become contaminated.
- Sometimes, simply modifying the horse's environment is enough to clear his legs up. Oftentimes, however, you need to apply a topical treatment to help eliminate the lesions, Yu said. Topical options include:
- **Antibacterials**—Secondary bacterial infections can complicate EPD healing, so Yu recommended using a commercially available antibacterial shampoo (look for ingredients such as accelerated hydrogen peroxide, benzoyl peroxide, ethyl lactate, and 2% chlorhexidine) on the affected area once or twice daily, massaging the product into the affected areas for about 10 minutes, rinsing with cool to cold water and towel drying the area well. Do this for seven to 10 days in a row, then cut back the frequency to two to three times each week until resolved, he said. He also noted that accelerated hydrogen peroxide can help fight a variety of bacterial, fungal, and viral pathogens. Topical ointments are another option, Yu said. Look for silver sulfadiazine or a 2% mupirocin product (the latter is a Methicillin-resistant *Staphylococcus* species has been cultured), as both can penetrate the epidermis and address secondary bacterial infection, he said. "In severe deep infections, your veterinarian may also prescribe oral or injectable antibiotics such as trimethoprim sulfamethoxazole or penicillin," he added. He also stressed that, even when using an antibacterial therapy, it is crucial to keep the horse's legs clean and dry. Clip the affected area, keep it clean and dry, and, if consistent stabling isn't possible, consider using padded, water-repellent bandages and changing them daily.
 - **Antifungals** are another potentially beneficial option, especially when fighting a confirmed ringworm or *Malassezia* infection, Yu said. "Topically applied enilconazole is currently labeled for use in horses in many countries other than the United States where instead, it is labeled for use in poultry facilities," he said. "Enilconazole is used to treat fungal and yeast infections with excellent results. Ketoconazole, climbazole, or miconazole-based shampoo or ointments or topical products that contain a mixture of any one of aforementioned ingredients and chlorhexidine can also be used." He also noted that your veterinarian might prescribe oral antifungal agents such as fluconazole in cases of severe, generalized infections.
 - **Steroid ointments, oral tablets, or injectable products** are useful in cases involving immune-mediated conditions, said Yu. Veterinarians have individual preferences on what steroid should be used in different cases, so work with your practitioner to ensure your horse receives the appropriate treatment.

"Although topical treatments are work-intensive, they are currently the most effective and economical method of delivery to superficial lesions," Yu said. In severe cases, however, some horses might need systemic therapy to help clear up the condition, he added. Antibiotic and antifungal medications, immunosuppressive or immunomodulatory therapies, and antiparasitic products are all options for different conditions. It is crucial to work with your veterinarian to ensure your horse receives the medication he needs to regain his health.

Take-Home Message

"The prognosis for EPD depends on the underlying cause, our capacity to identify it, and the chronicity of the condition," Yu said. "It is important to ensure that predisposing, primary, and perpetuating factors are taken into consideration during any diagnostic work-up and treatment planning in order to optimize a positive outcome."