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At Tradition of Leadership and Excellence in Equine Medicine

**Three skin diseases associated with Florida summers:
Dermatophilosis, Culicoides Hypersensitivity and Habronemiasis
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With the heat, humidity, and rainy season (thankfully, it has returned), come increased biting bugs. Moist conditions and bugs are responsible for inciting many skin conditions of both the horse and the rider! The following discussion reviews three specific conditions found during summer (and to some extent, year 'round). So put on your bug repellent and read on...

Dermatophilosis is commonly called "Rain Rot or Rain Scald" when on the body and "Scratches or Dew Poisoning" when on the lower limb (especially the back of the pastern). This skin disease is caused by the bacteria *Dermatophilus congolensis*. Moisture combined with a break in the skin by prolonged exposure to rain or abrasions provide necessary conditions for inoculation. The organism can be present in the soil or on grooming/tack items from other infected horses. Biting insects may also play a role in transmission.

The hallmark lesion of Rain Rot is "paint-brush" crusts that are found over the backs and rump. These are small concretions of raised tufts of hair stuck together by serum and scaling debris that can be painful when touched. White-skinned areas seem particularly at risk. Eventually they can progress to small, hairless cratered areas with pus. Lesions, especially on the pastern, can progress under the skin with secondary infections and cause lymphangitis or cellulites. Usually the diagnosis of dermatophilosis is made by examination of the skin lesions but crusts can be collected for lab tests.

The treatment is aimed at removing the bacterial infection and drying up the affected areas. Some cases are self-limiting and respond to a change in environment (stall confinement) or dry weather. Medicated shampoos containing benzoyl peroxide or povidone iodine are effective. The shampoo is applied and allowed to soak in for 10 minutes. Then as many of the crusts and scabs as possible are removed and the horse is rinsed well. This treatment is done every 5 to 7 days until no new lesions are found. In severe cases, Penicillin or Trimethoprim/sulfa antibiotics can be administered to speed recovery.

Culicoides Hypersensitivity is known by many common names including “Sweet Itch”, “Muck Itch”, “Queensland Itch”, and “Summer Itch”. The condition is caused by an allergy (hypersensitivity) to the sand fly (“no-see-ums or biting midges”), *Culicoides* spp and is most common during the warmer months. Therefore it is a seasonally recurring condition and is characterized by an irritating dermatitis most often involving the mane, tail, ears, chest and withers. Affected horses are extremely itchy and rub on any surface possible. Much of the skin lesions are due to secondary trauma from itching.

Hyposensitization has mainly been unrewarding and the allergy must be managed by reduced exposure and decreasing the allergic response. Since the flies are known to be most active from late afternoon until dawn when there is little to no breeze, stabling during these times with fans is recommended. The midges are smaller than mosquitoes (0.6 to 3mm) and require very small netting (32 x 32 mesh) if stall protection is added. Diligent use of fly repellents especially at dusk is helpful but usually requires frequent application. Avon’s Skin So Soft mixed 50:50 with water has been advocated as a natural repellent but leaves an oily residue. A new spot-on permethrin product by Farnam may prove useful as similar products have been in England. Usually, once the rubbing becomes severe, corticosteroids are needed to stop the allergic reaction and itching. The doses are slowly tapered to a maintenance dose given every other day or as needed through the season. Medicated shampoos can be used to treat any secondary infections and sooth the skin.

Habronemiasis, also known as “summer sore”, is caused by larvae of mainly the *Habronema* species, which is deposited in skin wounds and most places like the eye or sheath by infected flies. *Habronema* normally live in the horse stomach and their larvae are passed in the manure where they are ingested by fly larvae. The flies develop and eventually deposit the *Habronema* larvae on the mouth of the horse where it eventually reaches the stomach and the cycle begins again. It is only when the larvae are deposited on broken skin or a fly bite that skin habronemiasis may result. The larvae are unable to develop into adults in the skin and the reaction is thought to be a hypersensitivity to the dead and dying larvae. It is a seasonal condition that corresponds with the occurrence of the fly vector and can reoccur in subsequent years in the same horse.

The lesions may begin as nodular swellings but become ulcerative and proliferative like cheesy proud flesh with dead, yellow craters containing granules of dead larvae. These lesions are usually extremely itchy and self-trauma becomes a perpetuating factor. The diagnosis is suggested by the lesion’s history and appearance but can be confused with other infections, proud flesh, and sarcoids. A biopsy is suggested if response to treatment is prolonged.

Treatment is aimed at the following: reducing the inflammatory response to the dead larvae, fly control, and removal of *Habronema* from the stomach.

Ivermectin or Moxidectin (Quest R) is given every 1 to 2 weeks for 3 to 4 treatments and then as needed until the lesion is healed. All other horses on the farm should be treated at least once with these de-wormers to remove environmental sources. Ivermectin or Moxidectin can also be combined with a corticosteroid and applied topically to the lesion. If possible, the lesion is covered to protect from subsequent larval deposition and trauma. Systemic corticosteroids are often needed to control the inflammatory response. Occasionally, surgical removal or cryotherapy is needed to debride a lesion. Manure should be removed as soon as possible to prevent fly maturation and premises fly control is recommended.

And just a little reminder, West Nile Virus vaccination should be given at least every 6 months after the initial 2 shot series...are your horses adequately vaccinated?

Stay cool and Have a Great Summer!