



an equine medicine presentation...

Rain Rot (Dermatophilosis) in Horses

understanding one of the most common skin infection of equine

this presentation

consists of...

basics

diagnosis

treatment

medications

follow-up

miscellaneous



1) Basics

overview, signalment, signs, &
causes and risk factors

Basic:

Overview

Dermatophilosis is a common bacterial exudative crusting dermatitis of horses that may affect multiple horses in a barn but not necessarily all of them. It typically occurs during periods of heavy rain. Tightly adherent crusts most commonly affect the dorsum of the trunk, especially the saddle region or the dorsal surface of both hind cannon bones. It is a cause of pastern dermatitis (grease heel, scratches). This infection is easily resolved with topical and/or systemic antimicrobial therapy.



Basic: Signalment

No age, breed, or sex predilection has been recognized. Horses that are debilitated may develop a chronic infection. If a horse is kept in a wet stall or pen, chronic pastern dermatitis may ensue.

A close-up photograph of a horse's neck and shoulder. The horse has dark brown, wavy hair on its body and a lighter-colored, more upright mane. The lighting highlights the texture of the hair.

Basic: Clinical Signs

Clinical lesions vary with the stage of disease.

Initially, follicular and nonfollicular papules and pustules form tightly adherent crusts.



Crusts may cluster to form large coalescing crusted plaques associated with a thick yellow to light green suppurative exudate.

Removal of crusts results in the distal hair ends protruding through the crust, giving a "paint brush" appearance. Moist, erosive, erythematous, alopecic lesions are present when the crust is removed.

Alopecia is variable.

If lesions are palpated, pain may be elicited.



Pastern or fetlock involvement

may cause lameness and localized swelling.

Lymphadenopathy
may occur.



Basic: Causes and Risk Factors

of Equine Rain Rot

Dermatophilosis is caused by

a Gram-positive, non-acid-fast, facultative anaerobic actinomycete—*Dermatophilus congolensis*.

Skin damage and moisture

are the two most important factors required for an infection to occur. Skin damage allows colonization, while moisture promotes the growth of the organism.

Biting flies and ticks

may spread the disease, as well as fomites. Crusts, whether on the horse or in the environment, are infectious.



2) Diagnosis

*differential diagnosis; cbc/biochemistry/urinalysis;
and diagnostic procedures*

Diagnosis: Differential Diagnosis

Differential diagnoses depend on the distribution of the lesions.

If the lesions are truncal,

consider dermatophytosis, pemphigus foliaceus, demodicosis, staphylococcal folliculitis, and drug reactions.

If only pastern involvement is present,

then staphylococcal folliculitis/furunculosis, dermatophytosis, *Chorioptes* infestation, trombiculosis, irritant or allergic contact dermatitis, photosensitization, and vasculitis need to be ruled out.

If lesions are limited to the white areas of the body,

consider photosensitization due to liver disease, plant poisoning, or sunburn.

Diagnosis:
CBC / Biochemistry /
Urinalysis

GENERALLY, NOT
OF VALUE

diagnostic procedures

diagnosis:

The distribution and types of lesions present are used to establish the diagnosis.



Cytology of exudate and/or crust should be stained with a modified Wright's stain (Diff-Quik). Cytology collected by impression smears from a lesion in which the crust has been removed, and from the underside of a moist crust, is most rewarding.



Dermatophilus organisms appear as cocci that form parallel rows within branching filaments ("railroad tracks"). Detection of the organism from chronic lesions is often challenging.



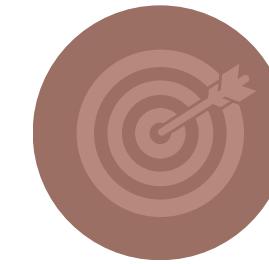
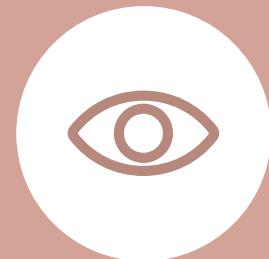


3) Treatment

medical regimen

Be cognizant of the infectious and zoonotic potential of the crusts.

Wear gloves when bathing the horse and when handling the crusts. Dispose of crusts in a trash bag; do not discard them into the environment.



Essential components of treatment include:

1. Keeping the horse and its environment clean and dry.
2. Gently removing the crusts after soaking with an antibacterial shampoo.



4) Medications

*drug(s) of choices & contraindications /
possible interactions*

Drug(s) of Choices

medications



Topical therapy

and establishing good management practices may be all that are needed.



Bathe the horse with a shampoo

that has antimicrobial properties every 1–2 days until the lesions are healed (typically 10–14 days). Allow the shampoo a contact time of 10–15 minutes before rinsing.

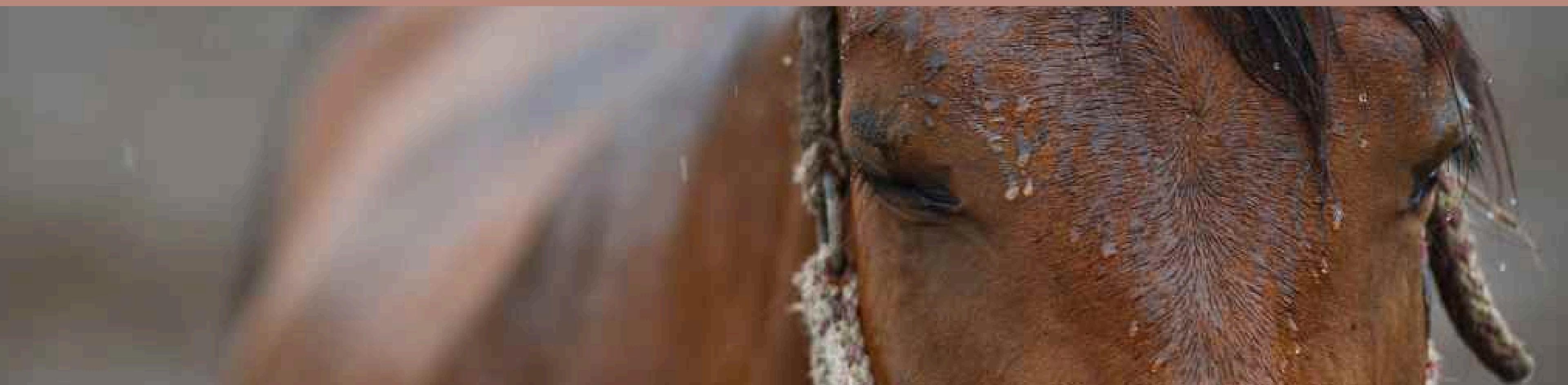


If bathing is not possible,

and the lesions are focal, 2–4% chlorhexidine, accelerated hydrogen peroxide, benzoyl peroxide sprays, wipes, mousses, or lotions may be used.

Medication: Contraindications / Possible Interactions

none





5) Follow-up

*patient monitoring; prevention/avoidance;
possible complications; & expected course and prognosis*

Follow-up: Patient Monitoring

Clinical appearance.



Follow-up: Prevention / Avoidance



01

Management changes

include controlling flies and keeping the environment dry.

02

If the horse is boarded,

inform the stable manager of the diagnosis so that appropriate recommendations and modifications can be made.

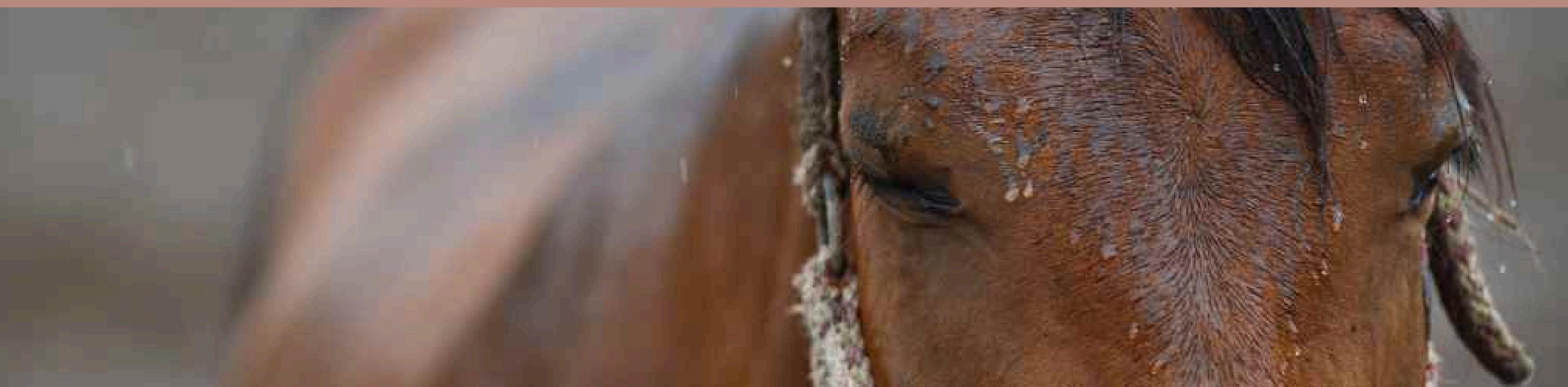
03

The bacteria can survive

in the environment for several years.

Follow-up: Possible Complications

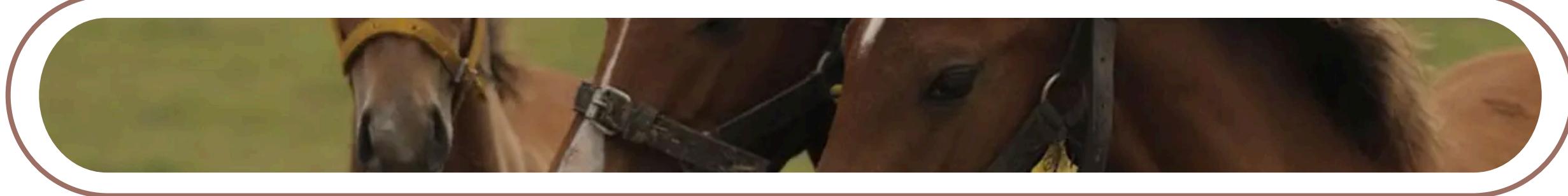
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Follow-up: Expected Course and Prognosis

| Many cases are self-limiting once environmental factors are corrected

| Excellent prognosis





6) Miscellaneous

*associated conditions &
zoonotic potential*



Associated Conditions

Chronic infections may be associated with poor nutrition, heavy parasite infestation, viral diseases, or neoplasia.

In some cases, white-haired areas are more severely affected. Infection with *Dermatophilus* may result in secondary photodermatitis.

Miscellaneous: Zoonotic Potential

Dermatophilus congolensis
is a zoonotic disease.

Reference:

Lavoie, J. P., & Hinchcliff, K. W. (Eds.). (2018). Blackwell's five-minute veterinary consult: Equine (3rd ed.). Wiley-Blackwell.

Thank You!

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5 Doctor of Veterinary Medicine - A