

Summer dermatitis on horses – practical treatment guidelines

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Introduction

Summer dermatitis is the most common allergic skin disease on horses¹. Summer dermatitis is an immunological disease where the body develops an oversensitivity reaction to the salivary gland proteins of flying biting insects²⁻³. Most common symptomatic areas are dorsal midline and the base of mane and tail, head and often ears⁴.



Tail hardened by chaffing before and after the treatment.

Severe secondary infection before and after the treatment.

When left untreated, the allergic inflammation can lead to thickening of the skin and development of fibrosis. Injuries caused by chaffing, often develop secondary infections⁵.

The most important factor in the treatment of the disease is avoiding triggers (stable environment and horseyards, eczema rug and insect repellents). Regular treatment of the localised inflammation is also recommended. The most effective medication for allergic inflammation is glucocorticosteroids. Side effects of systematic steroid use include laminitis and immunosuppression^{6, 7}.

The trial's purpose was to investigate the impact of regular skin care on symptoms following recommendations for allergic skin care for eg. dogs and humans during one week. The trial also mapped treatment options and views on the disease between owners of horses with summer dermatitis.

Material

The trial used social media to recruit horse owners with summer dermatitis. 10 different horses of various breeds took part in the trial. An evaluation by a veterinarian was used in order to categorise horses into three different groups based on the severity of their symptoms; 0-4 representing mild symptoms, 5-8 moderate symptoms and 9-10 severe symptoms. Eight of the horses fell into the moderate symptoms group and 2 horses were categorised as having severe summer dermatitis. None of the horses had been treated with glucocorticosteroids or antihistamines in the previous 6 months leading into the trial.

Method

SOLHEDS Derma products were used as the treatment for this trial.

Derma 1 antiseptic shampoo – Lavandula, Mentha, Cinnamomum, Thymus, Picea Abies

Derma2 Serum – Brassica Oleifera, Lavandula, Chamomile, Daucus carota, Hordeum vulgare, Picea Abies

Derma3 cream/spray – Antelaea azadirachta, Cymbopogon, Eucalyptus, pitch oil

Derma5 Antimicrobial cream – Picea Abies, Aloe Barbadensis, Lavandula, Mentha, Cymbopogon, Thymus, Linum usitatissimum, Triticum Vulgare, mineral silicate

Visual grading chart was used to assess the effectiveness of the treatment. The symptomatic areas were divided into 3 different groups in the chart. 1 to 10 grading scale was used with 10 representing the most severe symptoms and 1 representing normal, non-symptomatic skin.

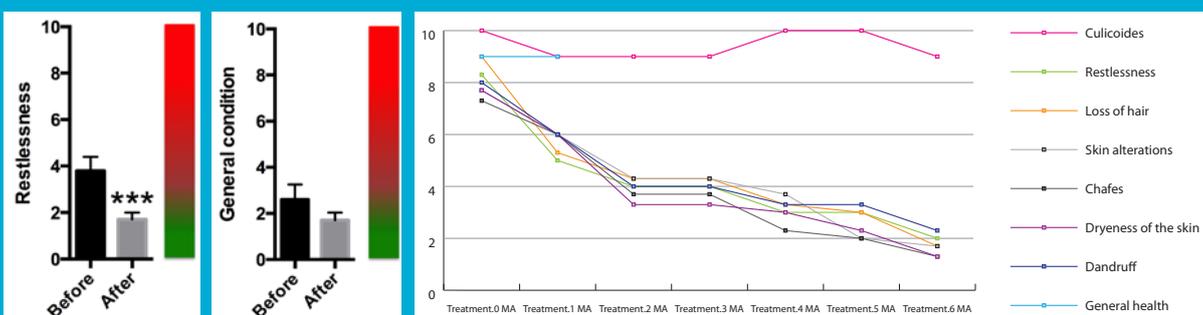
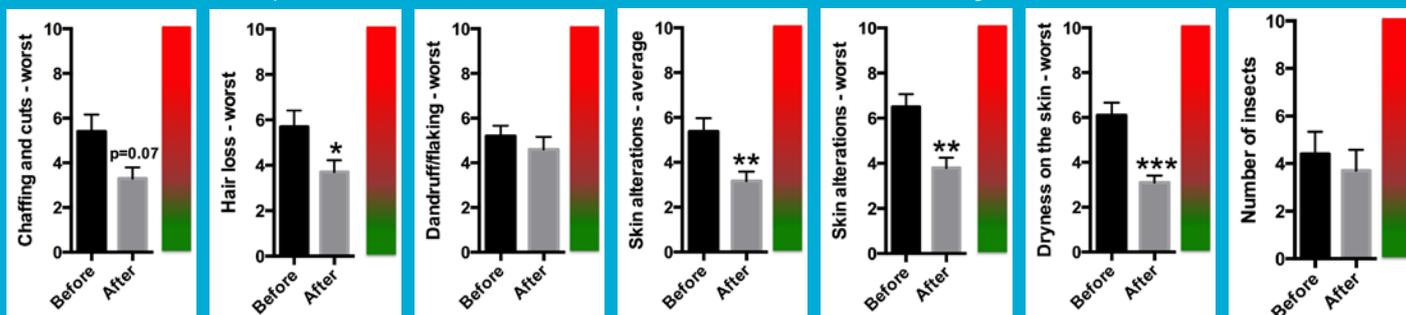
Parameters used

- General condition
- Possible dandruff/flaking
- Dryness on the skin
- Chaffing and cuts
- Skin alterations (colour, swelling, redness, sensitivity to touch, temperature, hardness and lack of elasticity)
- Hair loss
- Restlessness
- Number of insects, estimated visually

-2-0 day	1 st day	2 nd -6 th day	7 th day
No treatment Allowed to wear a rug	Assessment by a vet Treatment instructions: Wash with Derma1 Local treatment with Derma5 cream Derma3 odour deterrent used next to symptomatic areas Distribution of questionnaire to owners Allowed to wear a rug	Owner completes the prescribed treatment and self assesses the result. Local treatment with Derma2 serum Derma3 odour deterrent used next to symptomatic areas. Allowed to wear a rug	Assessment by vet Feedback from owners

Results

The parameters where the treatment had most impact were Dryness of the skin and Skin Alterations. Results are represented in graphs 1-9. Results from the most severely affected area (worst) and in skin alterations also results from the mean average of all 3 evaluated affected areas.



Example of a horse's treatment period. Showing mean average of assessed parameters.

The horses that had the most severe symptoms had the highest increase in dandruff/flakiness or their results were not significant. These horses in question had the most cuts and chaffing and largest area of damaged skin, hence biggest need for skin renewal. Other horses showed decrease in flakiness.

The comparison between the veterinarian assessment and assessment done by the horse owner showed no significant difference. The owners concentrated their assessment to the hair loss, finding it more difficult to assess skin alterations. The assessment of veterinarian discovered symptomatic areas in all horses that the owners had not realised were there. The results from the questionnaire completed by owners showed that prior to trial, the treatment of the summer dermatitis had been lacking or inadequate. These inadequacies were apparent when instructing horse owners for the trial, most common problems were:

1. Infrequency in treatment – typically treated 3-5 times per week	2. Treatment only in areas with hair loss – owners not able to recognise skin alterations without hair loss	3. Treatment doesn't reach the skin	4. Poor hygiene – skin of the horse seldom washed	5. Used products are not anti-inflammatory
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The severity of symptoms correlated with owner's ability to recognise symptoms, with the owners who found it hardest to assess symptoms having the most affected horses. The owners also requested more practical treatment instructions from their veterinarians.

Conclusion

The trial showed significant changes in the symptoms during the daily treatment regime over the one week period. The positive skin alterations eg. reduction of redness, heat, swelling and lack of elasticity and hardness, point to the anti-inflammatory effect of the treatment. The feedback from the questionnaire was more positive than the actual grading.

The trial was completed in South of Finland during a period particularly challenging with midges. Routinely using a rug is a standard practice among horse owners. However, solely using a rug did not prove to be adequate with the horses involved in the trial. Some of the owners found daily treatment of their horses too time consuming and difficult and use wishful thinking in relying on a rug as the preferred option in the management of the disease.

Summer dermatitis is well researched and numerous articles have been published on the issue^{1-5, 8)}. There are considerable similarities between summer dermatitis and allergic skin conditions in dogs and humans; however these similarities don't correlate in treatment options.

The trial showed significant improvements in summer dermatitis despite its small target group and relative short period time for treatment. The SOLHEDS products use natural compounds with their efficacy and anti-inflammatory and anti-microbial affect proven in natural medicine trials^{9, 10, 11)}. Maintaining skin moisture levels and improving fatty acid levels are both recommended treatments for skin allergies, utilising natural oils in SOLDHEDS products is in line with this recommendation^{6, 7)}. The added benefit of natural, etheric oils is their odour, which is a natural insect deterrent. It is important to provide thorough instructions to horse owners to maximise the treatment benefits. It has become easier to diagnose summer dermatitis but despite the disease being easier to diagnose, the published treatment improvements haven't followed to the practice at the same rate. Summer dermatitis is a chronic disease and as such, it is easy for the owners to become complacent in its treatment. Veterinarians mistakenly assume that owners are well equipped in treating this disease. As an outcome from the feedback and results from trial, following instructions were completed to better instruct and guide horse owners in the care of their horses with summer dermatitis.

Instructions

1. Clarify correct diagnosis with the owner. Ensure that symptoms are caused by flying and biting insects. Rule out other possible causes eg. Parasites or irritation from sun. Discuss living environment and whether any changes are required.	2. Palpate the skin of the horse and assist the owner in recognising skin alterations and unhealthy skin. Pay special attention to ears, armpits, legs and whole base of the tail.	3. Discuss current treatment regime and correct when appropriate. Strong home remedies often burn the skin, oils and greasy ointments gather dirt and put the skin at risk of further infections through not allowing the skin to breath.	4. Provide information on care of allergic skin.
a) Avoid allergens, improve living environment – well ventilated areas and paddocks, avoid stagnant water, bring horses in between dusk and dawn if necessary, use rug and insect repellents if necessary.	b) Maintain hygiene and moisture balance. Washing with water is often adequate and when necessary use mild shampoo (no sulphate based shampoo). Maintaining moisture balance improves skin's elasticity.	c) Treat allergic inflammation with anti-inflammatory products.	d) Motivate owners to regular care before start of the season eg. Late spring, early summer.
e) If rubbing has caused the horse to have severe chaffing and has open wounds, consider systemic use of glucocorticosteroids. Instruct the owner to treat any open wounds and to maintain the skin with routine, regular care as soon as wounds tolerate.	f) Recognition of secondary skin infections. Instruct the horse owner in correct care of skin infections, use antimicrobial products and maintain with routine, regular care as soon as infection allows.	g) Some clinicians have successfully used antihistamine medication in treatment of these horses.	

Using recommended treatment guidelines for allergic skin conditions would improve the symptoms and the quality of life of the horses suffering from summer dermatitis. Optimal treatment consists of holistic treatment of horse's skin throughout the summer.

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