

Letter to the Editor

On the possible role of food allergy in chronic urticaria in racing horses

Equine chronic urticaria (CU) is a relatively common condition that may impair quality of life for horses and their owners, including interference with riding for sport and pleasure. The aetiology of equine CU includes allergic and physical factors, or a combination of both.¹

In 1999 and 2004, manuscripts which detailed clinical studies on equine CU were published in two human allergy journals in French.^{2,3} Perhaps as a result of the journals and language of publication, these studies appear to have been largely overlooked by the veterinary dermatology community. We feel compelled to summarize their findings here.

The authors of these studies observed that CU was prevalent in racehorses, as 18 of 22 horses (82%) diagnosed with the disease came from the high-level training grounds around Chantilly, France. These equine athletes received large proportions of concentrated feed during training, leading to the hypothesis that the feeds and increased stress were involved in the aetiopathogenesis of CU. Altogether, 22 horses with CU that were otherwise healthy, were included in the study. The mean duration of CU was 208 days (range 21 to 1,460 days). Most horses had been treated previously with glucocorticoids without long-term benefit.

Owners were asked to provide samples of all feeds eaten by the horses, including hay and straw. Food items were crushed in saline, incubated for 60 min, and then extracted through filter paper; 0.05 mL of each extract and the usual control subsequently were injected intradermally, with wheal-and-flare responses evaluated after 20 min. Each horse had an intradermal test (IDT) performed for several food items, with an average of 8.7 foods per horse. Then they were monitored for ≤ 3 h to detect potential systemic hypersensitivity reactions. In total, 192 food IDTs were performed. Thirty-five (18%) IDT reactions were graded as clearly positive, 19 (10%) were considered to be doubtful and all others were clearly negative. At least one positive food IDT was seen in 21 of 22 horses (96%).

Positive IDTs included seven to hays, eight to oats, eight to alfalfa, three to a commercial food supplements, two to barley, two to straws, and two to a commercial vitamin and mineral mix. Interestingly, such IDTs led to systemic signs in eight horses (36%); for example, an

increase in the severity of urticaria and pruritus (eight of 22, 36%), or fibrin-covered stools (six of 22, 27%).

A restricted diet was given to the 21 horses with a positive food IDT, excluding all potentially offending foods for ≥ 30 days. When hays or straws were positive, owners were asked to switch to hay harvested from a different location. Additionally, a clay-based powder was given to 13 of the horses for up to two months to improve the gastrointestinal barrier. Follow-up was possible for 19 horses, with improvement in signs of CU noted within three days of the diet change, and no further relapse in 17 of 19 (89%) horses. A gradual reintroduction of the implicated foods was performed in 17 horses within one to six months. No relapses of CU were observed, which to us suggests that the slow food reintroduction might have induced an oral tolerance.

These observations support the hypothesis that CU might be caused by foods. The authors of these reports suspected that the high observed rate of CU in these racehorses might be the result of the multiple supplements given – often at high doses – or to the training and racing that could have contributed to stress-induced gastrointestinal signs. As such, although these results cannot yet be extrapolated to all horses, they should be taken into account when intensively trained horses with CU are examined.

Although the practice of performing IDTs with crushed food extracts cannot be condoned owing to their lack of sterility, the observations reported herein suggest that further studies are needed on the potential role of adverse reactions to foods as a cause of equine CU. We propose that an interesting follow-up study would be to perform IgE immunoblotting on the serum of horses with CU which have been shown to be reactive to specific foods, akin to what has been reported for dogs with suspected food allergies.⁴

In conclusion, further evaluations of dietary trials are warranted, not only in performance horses, but also in any horse with CU.

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