



Short Communication

Management of Idiopathic Urticaria in Horses by Ayurveda

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ABSTRACT

A total of six horses were presented with severe generalized lesions including wheal with dermal edema, erythema, papules, pustules and angioedema. In one horse food hypersensitivity was found, while rest were diagnosed for idiopathic urticaria. Haridrakhanda Brihat, which is a polyherbal combination containing haridra, nishoth, hareetaki, sharkara, mustaka, ajwain, chitrak, kutki, vidand, lauh bhasma and abhrak bhasma as main ingredients was given initially @ 15 gm twice a day orally for 5 weeks, along with dexamethasone at a dose rate of 0.02 mg/kg body weight, intramuscularly and cetirizine 0.3 mg/kg body weight twice a day orally, till subsidence of urticaria. After that dose of Haridrakhanda was reduced to 10 gm twice a day for next 6 weeks and dexamethasone, cetirizine were withdrawn. Appreciable results were seen in 4 horses out of 5, based on which, it is concluded that besides, conventional medical therapy of urticaria and modification of environment, Haridrakhanda can be used as add on drug for management of urticaria in equines.

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Among the domesticated species of animals, horse is the most prone to developing urticaria (Janet, 2011), which can occur at any age (Jose *et al.*, 2001) without any gender predisposition. Although disease can occur in all breed of horses but Thoroughbreds and Arabians may be more predisposed (Beltrani, 1996). Urticaria is considered as chronic, if duration is more than 6 weeks, and recurrent, if more than 3 episodes occur (Janet, 2011). Urticaria may have both immunological and non-immunological background (Von *et al.*, 2000). Immunological basis includes hypersensitivity, allergic urticaria through insect bite, drug, atopy and food allergy (Jose *et al.*, 2001), while non-immunological causes include cold urticaria, exercise induced urticaria (Von *et al.*, 2000). Urticaria is only a clinical sign of a disease rather than a specific disease entity, the clinical manifestations can vary from a minor transitory event to a major systemic (but rarely life-threatening) problem.

Clinical manifestation of equine urticaria may develop within minutes to hours (Jose, 2001) in acute and per acute onset and manifested as wheals due to dermal edema resulting from the mast cell degranulation and chemical mediators of inflammation (Zuberbier, 2003), with or without accompanying perivascular to diffuse infiltration of eosinophil and lymphocyte (Scheie and Flaoyen, 2003). Horse exhibited conventional forms of urticaria followed by giant/exudative form and rarely polycyclic (gyrate) forms of wheals, less common signs included scales, crusts, papule, alopecia and oozing (Kerem and Bulent, 2010). Urticaria distributed bilateral and symmetrical on the trunk, neck,

thorax, abdomen and extremities, in some cases papule and exudative wheals may also be seen (Von *et al.*, 2000). As intradermal testing has not been commonly used for routine clinical diagnosis (Lebis *et al.*, 2006), management is mostly on empirical basis based on clinical signs and requires long time therapy involving food elimination, administration of corticosteroids and antihistamines and environmental modifications. Response to therapy is not immediate and can take up to 12 months to determine efficacy (Yu, 2006). Corticosteroids in long run causes serious side effects such as laminitis, steroid induced hepatopathy and iatrogenic hyperadrenocorticism (Vandenabeele *et al.*, 2004), antihistamines may also causes drowsiness and nervousness in horses (White, 2005), resulting in challenging owner compliance. Present study reports the clinical efficacy of Haridrakhanda® (Dabur India Limited) in idiopathic recurrent urticaria in horses.

A total of six horses with history of conventional urticaria confined to different body parts presented to Teaching Veterinary Clinical Complex, College of Veterinary and Animal Sciences, Bikaner, India were selected for the present study. The horses (two male and four female) ranged in age from 2 to 4.5 years and belongs to thoroughbred breed, from different stable. In all cases, history revealed chronicity (more than one year duration) of illness with recurrent nature (several episodes). All the horses were regularly dewormed and previously treated with antihistaminic, steroid and antibiotics, for which they responded well, but after switching off the therapy,

condition recurs again within fifteen days. Four out of six horses have non-seasonal, while two showed seasonal urticaria. Appetite, water intake, urination and behavior were almost normal in all the horses but one horse presented with additional complaint of concurrent diarrhea. Clinical examination revealed severe generalized lesions including wheal with dermal edema, erythema, papules,

pustules and angioedema (Table-1). In two cases skin was oozing cellular fluid resulting in crusting along with excoriation. Intense pruritus was seen in four horses while two horses presented with mild pruritus. All the horses underwent routine hematological and skin scrapping examination, which was unremarkable except eosinophilia.

Table 1: Description of horses suffering from urticaria

Sr. No.	Appox. Age	Nature of urticaria (Seasonal/ non-seasonal)	Signs of other systems	Pruritus
1	2.0	Non-seasonal	Diarrhea	Intense
2	3.5	Non-seasonal	None	Mild
3	4.5	Seasonal	None	Intense
4	2.5	Seasonal	None	Mild
5	3.5	Non-seasonal	None	Intense
6	2.5	Non-seasonal	None	Intense

Due to recurrent nature of disease, dietary factor was suspected and the only way to diagnose food hypersensitivity was food trial, which was done for 8 weeks along with symptomatic treatment. During these weeks the horses were restricted from all presently fed feed and given alternate available different feed. At the end of the dietary trial urticaria subsided in one horses permanently, in this horse reintroduction of the previous dietary elements was done at one item per week to determine which food group or supplement is responsible for urticaria. Episode of urticaria started again with oat feeding, based on which, adverse reaction to oat was diagnosed in this horse. In this horse, urticaria was non-seasonal in nature with additional symptom of diarrhea, concurrent gastrointestinal signs in the form of diarrhea or soft stools with food allergy were previously reported by Sophie (2011). Improved managemental practices were tried in rest of five horses for 6 months, which includes moving of horses away from the current micro-environment, minimizing dust exposure in the stable, control of insects and flies in the environment, best possible reduction of the exposure to grass pollen, animal dander, plants/flower pollens, shrub pollens and crop pollens. During this period symptomatic control of urticaria was done with dexamethasone at a dose rate of 0.02 mg/kg body weight intramuscularly and cetirizine 0.3 mg/kg body weight twice a day orally (Janet, 2011). For this combined medical treatment and environmental modification practices, horses responded well during the therapy only and recurrence was recorded after switching off the therapy. Based on results of clinical and managemental trial, these five cases were diagnosed for idiopathic urticaria. In these horses Haridrakhand Brihat (Dabur india Ltd.) was started, which is a polyherbal combination containing haridra, nishoth, hareetaki, sharkara, mustaka, ajwain, chitrak, kutki, vidand, lauh bhasma and abhrak bhasma as main ingredients. Initially 15 gm Haridrakhand was given twice a day orally for 5 weeks, along with dexamethasone at a dose rate of 0.02 mg/kg body weight intramuscularly and cetirizine 0.3 mg/kg body weight twice orally, till subsidence of urticaria after that dose of Haridrakhand was reduced to 10 gm twice a day for next 6 weeks and dexamethasone, cetirizine were withdrawn. Horse owners were advised not to give cold water bath, very heavy exercise and extreme exposure to sunlight during this period. During this period no any

episode of urticaria was noticed in four horses, but one horse not responded for this therapy and continues to show recurrent urticaria. The main ingredient of Haridrakhand is turmeric, which is a known antiallergic herb and this medication is recommended in allergic conditions of the respiratory tract and skin allergies like urticaria, itching, blisters etc. (Nadkarni, 1976; Mahima *et al.*, 2012, 2013). Turmeric is one of the best blood purifier so it can be employed in all diseases which originate from blood. Urticaria results primarily from mast cell degranulation, although basophil degranulation may contribute to the lesions. Mast cell degranulation causes a release of potent chemical mediators, such as histamine and heparin, as well as cytokines, prostaglandins, and leukotrienes that contribute to increased vascular permeability and inflammation, which results in wheal formation (Grattan and Sabroe, 2002). All the hypersensitivity reactions are found to be involved in urticaria. Type I (IgE-mediated reaction) is often biphasic, with an early immediate phase (resulting in the release of preformed mediators) occurring within 30 minutes and a late phase (resulting in the release of newly formed mediators and from mediators released by infiltrating inflammatory cells) possibly occurring 6 to 8 hours later. Type II (i.e., the cytotoxic mechanism) may elicit complement-induced urticaria. This type of urticaria occurs in the urticarial stage of bullous pemphigoid in humans. Type III (i.e., immunocomplex disease) can induce urticaria due to vasculitis (Beltrani, 1996). Differentiation whether urticaria occurs seasonally or after an event (e.g., temperature change, exercise, vaccination, drug administration) can help narrow the differential list. Determining whether the seasonality is distinct can help direct diagnostic efforts toward investigating mosquito bite hypersensitivity, atopy, or food allergy. The success rate of this poly-herbal combination was 80% (4 out of 5), based on which, it is concluded that besides, conventional medical therapy of urticaria and modification of environment, Haridrakhand can be used as add on drug for management of urticaria in equines.

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