



APPROACH TO THERAPEUTIC MANAGEMENT OF EQUINE SKIN HYPERSENSITIVITY

^{a*}Sampurna Nand Yadav, ^aPrasanta Kumar Boro, ^bNekibuddin Ahmed, ^cBiraj Kumar Sarma & ^aPallabi Thakuria

^aDepartment of Veterinary Medicine, L.C.V.Sc, Joyhing, AAU, North Lakhimpur, Assam, India PIN-787051

^bDepartment of Animal Reproduction, Gynaecology & Obstetrics, L.C.V.Sc, Joyhing, AAU, North Lakhimpur, Assam, India PIN-787051

^cDepartment of Veterinary Surgery & Radiology, L.C.V.Sc, Joyhing, AAU, North Lakhimpur, Assam, India PIN-787051

Corresponding author's email-vetsamyadav80@gmail.com

ABSTRACT

In the present clinical case a equine with allergic reaction due to suspected insect bite having clinical findings of tail whipping, scratching and severe restlessness was stabilized with cold water bath, chlorpheniramine maleate @ 0.4 mg/ kg body weight intramuscular twice daily for three days and glucocorticoid- dexamethasone 0.1mg/kg body weight intramuscular once daily for three days. Further animal attendant was advised to prevent the exposure of the horse to insect by use of insect repellent and mosquito net. After five days the attendant reported recovery of the horse.

KEY WORDS: Equine, skin, hypersensitivity, therapeutic, management.

INTRODUCTION

Skin hypersensitivity in equine is multifactorial condition caused by insect, environment, feed *etc.* characterized by alopecia, excoriation, scaling and crusting of the skin. Insect-bite hypersensitivity is a chronic recurrent seasonal dermatitis caused by allergic reaction to the bite of midges, *culicoides* spp., wasp *etc.* Some horses have both manifestation of atopic disease (Skin and Respiratory) while others have one or the other (Marsella and Benedetto, 2017). Insect hypersensitivity is initially characterized by numerous papules, tufted hair, hyperaesthesia (Anderson *et al.*, 1988) and massive eosinophil infiltration. Affected animals are not fit for work purpose as in horses in Assam are mainly used as pack animal. Identification of the cause is an important

factor for the early recovery of the affected animal. The main treatment continues to be rigorous fly control and avoidance of insect bites (Marsella, 2013)

MATERIALS AND METHODS

A adult horse was presented to the Veterinary Clinical Complex, Lakhimpur College of Veterinary Science, Joyhing, North Lakhimpur, Assam with a history of insect bite allergic reaction on the body, tail whipping, scratching, extremely restless with body weight approximately 250kg. On enquiry the attendant was unable to identify the insect. Whereas clinical examination revealed all the physiological parameter within normal range, allergic areas were chiefly present along the shoulder and flank region (Figure-1).

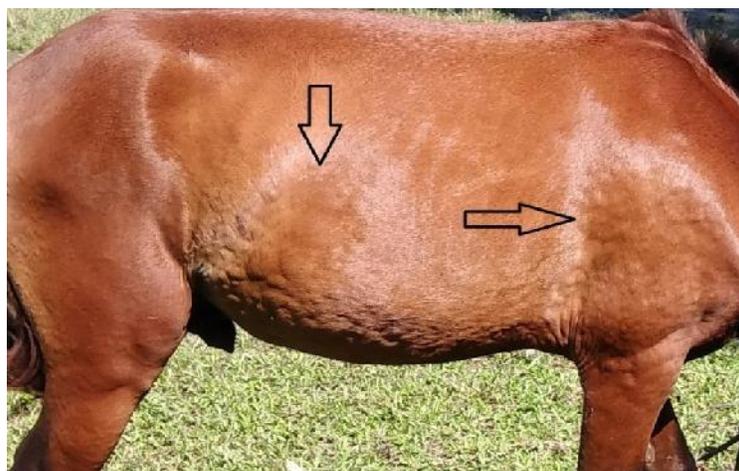


FIGURE 1: Arrow pointed towards the allergic reaction on the body

Animal was given cold water bath (Figure-2) immediately along with chlorpheniramine maleate @ 0.4 mg/kg body weight twice daily for three days (Zet) and glucocorticoids drug-dexamethasone (Dexona) at the dose rate

of 0.1 mg intramuscular daily for three days. The animal attendant was further advised to restrict the further exposure of the animal to any allergens by using fly repellent and mosquito net.



FIGURE 2: After cold water bath

RESULTS AND DISCUSSION

Although exact etiology of the allergy could not be determined because of limited history and resources. As discussed Knottenbelt, 2009 the commonest cause of the “allergic disease” in horse is surely urticaria but in spite of the high prevalence in the horse there is still controversy over its aetio-pathogenesis. For example some specialist believes that it is due to vaso active amine and that simply by reducing the feed responsible the condition will resolve. Others believe that there is genuine underlying hypersensitivity to inhaled, ingested or contacted allergen causes. Therefore in the present clinical case a general

treatment for hypersensitivity was administered to save the life of animal. The allergic lesion started to reduce after 24-36 hour of the administration of the drug. Antihistamine reduces the hypersensitivity by reducing the histamine level in the systemic circulation. Similar findings were also reviewed and reported by Anderson *et al* (1988) and Macmullan (1973). Glucocorticosteroids are successfully used in the treatment in the equine hypersensitivity. This finding was as per the report of Kleides and Lees, 1984 and Robinson (1983). The animal recovered after five days of treatment (Figure 3).

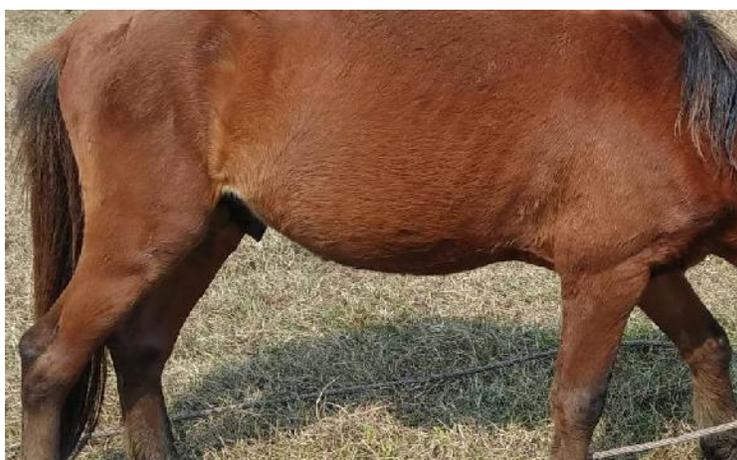


FIGURE 3- After 14 days of treatment

CONCLUSION

In the above case general treatment was administered for the hypersensitivity of equine. Extensive study need to be carried out to find out the different allergens and specific therapy present in this part of Assam, India.

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REFERENCES

Anderson, G.S., Belton, P. and Klieder, N. (1988) The Hypersensitivity of Horses to *Culicoides* bites in British Columbia Can. Vet. J. 29:718-723.

Fadok, V.A. (1995) Overview of equine pruritis. Vet. Clin. North Am. Equine Pract. 11(1):1-10.

Gabriel, A.F., Fettelschoss, V., Thomas, F., Giese, C., Daniel, M., Olomski, F., Kamarachev, J., Birkmann, K., Buhler, M., Kummer, M., Zeltis, A., Marti, E., Kundig, M. and Bachmann, F. (2018) Treating insect hyper sensitivity in horses with active vaccination against IL-5. J. of allergy and clinical immunology 142(4):1194-1205.

Kleides, N. and Lees, M.J. (1984) Culicoides hypersensitivity in the horse, 15 cases in the southwestern British Columbia Can. Vet. J. 25:26-32

Knottenbelt, D.C. (2009) Proceeding of the 11th International Congress of World Equine Veterinary Association, Guruja, SP, Brazil. 24th-27th September

Macmullan, W.C. (1971) Allergic Dermatitis in the equine. South west Vet. 24:121-126

Marsella, R. (2013) Equine allergy therapy: update on the treatment of environmental, insect bite hypersensitivity, and food allergies Vet Clin. North Am. Equine Pract. 29 (3):551-7

Marsella, R. and Benedetto, A.D. (2017) Atopic dermatitis in animal and People: An update and comparative review Veterinary Sciences, 4 (3), 37

Robinson, N.E. (1983) Sweet or Queensland Itch Culicoides Hyper sensitivity, I: Roobinson, N.E.ed. Current Therapy in equine Medicine. 558.