

Therapeutic management of anaphylactic shock in a mare

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Introduction

Anaphylaxis is an acute, transient and life threatening alteration in vascular permeability and smooth muscle contraction that occurs rapidly following a variety of possible stimuli (Smith, 2002).

History and Clinical Observation

An eight-year-old mare of Marwari breed was presented to the Department of Clinical Veterinary Medicine. Upon presentation the mare was in lateral recumbency. According to the history, the animal had fallen suddenly after combined administration of phenylbutazone and sodium salicylate intravenous injection. On clinical examination, there was tachycardia, dyspnoea and low rectal temperature. Blood samples were collected prior to and after treatment, taking all the aseptic precautions.

Hemoglobin count (Hb) and Packed Cell Volume (PCV) were determined following the procedures described by Jain (1986). Biochemical parameters viz, Blood urea nitrogen (BUN), Creatinine kinase, Alanine amino-transferase (ALT), Blood Glucose, Total Protein and Calcium were also determined. Biochemical analysis was carried out by commercially available kit using automated semi-autoanalyser (Robonik ASP 300).

Treatment, Results and Discussion

In Haemogram, there was slight decrease in the hemoglobin (9.2 g/dl) level but PCV was normal. Biochemical analysis revealed normal levels of BUN (13.2 mg %) and Creatinine kinase (243 U/L), with slightly elevated ALT level (63.1 U/L) and decreased Blood Glucose (35 mg/dl), Total Protein (4.79 gm %) and Calcium (8.91 mg %). Elevated ALT might be due to hepatotoxicity because of excessive medication (Kaneko *et al.*, 1999). Hypocalcaemia can exert additive depressive effect on endogenous glucose production, hence resulted in hypoglycemia (Schlumbohn and Harmeyer, 2003). Decreased protein level is attributable to impaired synthesis in liver.

The case was diagnosed as anaphylactic shock. Animal was treated with Epinephrine (1:10000) @ 0.01 mg/kg body weight I/V and Anistamin (Chlorphen aramine maleate) @10ml I/M daily were given for 3

days. The animal was treated with intravenous infusion of 5% dextrose and normal saline @ 30 lit /day in the ratio of 4:1 twice daily for 3 days. Intramuscularly dexamethasone @ 2mg/kg b.wt, the life saving Non-steroidal anti-inflammatory drug was given daily for three days. Smith (2002) also recommended the treatment of anaphylactic shock in horse with epinephrine, dexamethasone and antihistaminic. As there was hypocalcaemia, so intravenous infusion of Mifex containing calcium, magnesium phosphate and dextrose was given 100ml, slow I/V daily for 3 days. In order to improve the appetite, tonic Zigbo (Natural Remedies, Bangalore) @ 4 bolus orally was given twice daily till complete recovery. Intravenous infusion of Terramycin (Oxytetracycline of Pfizer) @ 5mg/kg b.wt twice daily was given to combat the secondary bacterial infection. The mare also received the I/M injection of Trineurosol-H (Merind) (Vit- B1, B6 and B12) 5ml and Tonophosphan, (Intervet India Ltd.) 10ml for three days. Animal also received the Iodex ointment massage till she moved on her legs. After four days animal was able to stand up with physical support and made an uneventful recovery.

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