Abstract

During the study, a total of 96 dogs were screened for specific and non-specific dermatitis, out of which 35 (36.46%) dogs were found to be the cases of non-specific dermatitis associated with various nutritional deficiencies. Plasma minerals analysis in the dermatitis cases revealed lower mean value of zinc i.e. 4.43 ±0.03 mg/L in 6 (17.14%), copper i.e. 0.76 ±0.03 mg/L in 34 (97.14%), iron i.e. 0.47 ±0.06 mg/L in 9 (25.71%), calcium i.e. 75.24 ±4.83 mg/L in 14 (40%), potassium i.e. 2.86 ±0.11 mEq/L in 14 (40%), magnesium i.e. 14.86 ±0.76 mg/L in 14 (40%) and phosphorus i.e. 23.07 ±0.26 mg/L in 7 (20%) dogs, indicating hypozincæmia, hypocupraemia, iron deficiency, hypocalcaemia, hypokalaemia, hypomagnæcaemia and hypophosphataemia respectively. The highest prevalence of dermatitis was recorded as 54.29% during the month of July, followed by prevalence rate of 42.86% during the month of August.

A characteristic alopecia specially around eyes, mouth and chin, hyperkeratotic plaques on foot pad and planum nasale were diagnostic of zinc deficient dermatitic dogs. A significant (P< 0.05) increase was noticed in mean value of skin fold thickness viz. 6.2 ±0.45 mm in zinc deficiency (group A), 7.28 ±0.73 mm in copper deficiency (group B), 6.17 ±0.36 mm in vitamin A deficiency (group C) and 6.24 ±0.39 mm in mixed deficiency (group D) as compared to healthy dogs viz. 4.75 ±0.21 mm. The plasma vitamins analysis reflected significantly (P< 0.05)
decreased mean level of vitamin A viz. 27.79 ±1.28 µg/dl in 9 (25.71 %) dogs which indicated hypovitaminosis A in group C. The plasma biochemical estimations showed significantly (P< 0.05) decreased mean concentrations of blood glucose and triglyceride with the respective mean values between 77.06 ±1.99 mg/dl and 78.29 ±1.8 mg/dl (hypoglycaemia); and between 21.02 ±1.47 mg/dl and 23.07 ±1.71 mg/dl in dermatitis dogs. The haemogram of dermatitis cases revealed significantly (P< 0.05) lower mean values of Hb (9.59 ±0.43 to 9.87 ±0.15 g%), PCV (29.64 ±1.28 to 30.33 ±0.76 %) and TEC (4.73 ±0.11 to 4.94 ±0.15 x10⁶/µl) indicating mild anaemia in the dogs of all groups. Zinc sulphate (orally) in group A, copper sulphate (i/v) in group B, vitamin A (i/m) in group C; and multiminerals and multivitamins (orally) in group D were able to cure the dermatitis when given along with supportive therapy.