Abstract

The study was conducted on 401 dogs presented at Veterinary Clinical Complex CSKHPKV, Palampur (H.P.). The dogs were screened for mange by standard procedures viz. skin scraping examination and ELISA. Among these 63 dogs were found positive for mange (35 for Demodectic and 28 for Sarcoptic mange). The overall prevalence of mange was 15.71% including 8.72% prevalence for demodectic mange and 6.99% for sarcoptic mange. Highest prevalence of mange was observed in the month of December (48.64%) and lowest in the month of June (2.70%). Prevalence of demodectic mange was found to be highest in the month of December (43.24%) and nil in the month of April and June where as in sarcoptic mange highest prevalence was recorded in the month of August (28.20%) and nil in the month of March and May. Further highest prevalence (45.71%) of demodectic mange was observed in dogs less than 6 months of age, while as sarcoptic mange was more prevalent (53.57%) in dogs above 1 year of age. Sex wise prevalence revealed that females (65.71%) suffered more from demodectic mange while as in sarcoptic mange disease was more prevalent (64.28%) in males. Dogs reared scientifically and systematically were found to be less prone to mange. The major clinical manifestations, recorded in demodectic mange were itching, erythema and alopecia. In sarcoptic mange apart from pruritis, erythema and alopecia; scaling was common finding. The mean value of skin fold thickness was significantly increased in both the types of mange as compared to control group. Face, periorbital area and fore legs were found to be the site of predilection for demodectic mites while as ventral surface of tail and ears were the predilection sites for sarcoptic
mites. The cutaneous cytology revealed cellular debris and Gram positive cocci in dogs where exudative skin lesions were evident. Histopathological examination revealed chronic inflammatory response in both the types of mange. In demodectic mange epidermal hyperplasia and folliculitis were observed whereas fibrous tissue proliferation and eosinophilic infiltration were consistent findings in sarcoptic mange. The haemogram revealed macrocytic anaemia, leucocytosis with neutrophilia, moderate eosinophilia and lymphopaenia in both types of mange. Biochemical estimations showed hypoglycaemia, hypoproteinaemia, hypoalbuminaemia and hyperglobulinaemia in both the types of mange. Total plasma immunoglobulins were found to be increased in all cases of demodectic mange whereas in sarcoptic mange immunoglobulins were within normal limits. Hypovitaminosis A was observed in demodectic mange whereas vitamin A concentration was within normal range in sarcoptic mange. Plasma mineral estimation depicted hypocupraemia, hypozincamaemia and decreased concentration of iron in demodectic mange whereas in sarcoptic mange plasma mineral values were within normal range. Enzymatic profile in demodectic mange revealed higher activity of superoxide dismutase and lower activity of catalase and acetylcholine esterase whereas in sarcoptic mange activity of superoxide dismutase and catalase were within normal limits and activity of acetylcholine esterase was decreased. The ELISA was highly sensitive (82.14%) for diagnosis of sarcoptic mange followed by pedal pinna reflex test (75%), while as skin scraping examination was found to be least sensitive (32.14%). Injectable and Topical preparations of Ivermectin were most and equally effective in curing both demodectic and sarcoptic mange followed by oral Ivermectin while as Amitraz was found to be least effective.