To study the prevalence of dermatological problems in canines 930 dogs were examined. The overall prevalence of dermatitis in canines was 23.51% with maximum prevalence in July (38.88%) and minimum (6.38%) during December. Parasitic dermatitis was most prevalent (34.82% per cent) dogs followed by bacterial (25.00% per cent), fungal (18.75% per cent), non specific (14.28% per cent) and nutritional (7.14%). Dogs less than one year of age was mostly affected and among breed Mongrels (67.52%) followed by German shepherd (09.20%) were mostly affected.

Introduction

Dermatological problems are common in dogs and occurrence varies with season, climatic factors, and managemental practice adopted in particular area (Sharma et al., 2008). Skin diseases can be of infectious or non infectious origin. Among infectious cause bacteria, fungus and parasites are the prime cause, while as in non-infectious causes allergic, autoimmune, hormonal or nutritional are important.

Materials and Methods

A total of 930 dogs presented for treatment at Referral Veterinary Clinics and Teaching Hospital, (VCTH), were examined for the prevalence of dermatosis and 195 cases were found positive for skin diseases of which 112 were studied. For confirmation of bacterial dermatitis, swabs were collected aseptically and skin scrapings were collected from different locations from pheriphery of active lesions in sterile vials for fungal screenings. Skin scrapings were also collected in 10% KOH for identification of ectoparastite. Blood samples were collected to diagnose mutational dermatosis. The infections other than bacterial, fungal and parasitic were kept in non specific category.

Results and discussion

Overall prevalence of canine dermatitis was 23.51% with maximum cases (38.88 per cent) recorded during July and minimum (6.38 per cent) during December. These findings are in agreement with that of Aujla (1993) and Sharma et al. (2008). The highest prevalence during July might be due to hot and humid environment condition favoring the growth of mite and bacteria (Upadhyay et al., 2005). Age wise highest prevalence was found in the age group 0-1years (42.17%), followed by 1-2years (22.44%), 2-3years (21.08%) and 3-4years (14.28%) (Fig.1). Among the breeds Mongrels (67.52%) followed by German shepherd (09.20%), Labrador (06.51%), Spitz (04.27%) and Doberman (3%)
Prevalence of bacterial dermatitis was 25.00 per cent (Fig.2) which was highest in month of July. Aujla (1993) and Sharma et al. (2008) have also reported 31.31 and 28.43 per cent bacterial dermatitis, respectively. Highest prevalence in July could be due to the warm wet weather which favors the growth of bacteria in skin (Roth and James, 1989). Age wise prevalence revealed that the dogs of less than one year of age were most susceptible (41.66 %) followed by dogs of one to two years of age (27.78 %) (Fig.3). Patil et al. (1999) and Sharma et al. (2008) reported 46 and 37.93 per cent incidence of pyoderma in dogs from one to four year of age group. Poor development of epithelium and lack of specific immunity acquired after first exposure could be the possible reason for infection in young dogs (Hay, 1992). Moreover high body temperature in young animals, high nutritive demand and overcrowding may also increase the susceptibility of young animals to bacterial infection (Scott et al., 1995). Sex wise prevalence of bacterial dermatitis revealed highest occurrence in female (53.57%) than in males (46.42%). Higher prevalence of infection in females could be due to the various stress factors such as estrus, whelping and lactation, which lower the immunity of these animals making them more prone to these infections. The lesions in bacterial dermatitis was alopecia, erythema, papule, pustule with oozing of purulent discharge, matting of hair, itching with occasional scab formation and were mainly located at the abdomen and groin (51.23 per cent), limbs (30.40 per cent) and dorsal midline (18.37 per cent).

The overall prevalence of fungal dermatitis was found to be 18.75 per cent (Fig.2). Sumathi and Vasu (2009) observed 20.50 per cent occurrence of fungal infection in canine. The prevalence was highest in
November and lowest in August. Higher occurrence of fungal dermatitis during winter month could be due to close contact of the animals in winter and infrequent bathing thereby increasing alkannity of skin (Sharma et al., 2008). Age wise prevalence revealed highest cases in dogs of less than one year of age group (Fig.4). The possible reason for this could be lack of specific immunity acquired after first exposure in young dogs (Hay, 1992). Further biochemical properties of skin and skin secretions, especially low fatty acids in the sebum may also be responsible for the infection in young ones, as these fatty acids are highly fungistatic (Hay, 1992). Sex wise prevalence revealed that male dogs were more susceptible (52.38 %) than female dogs (47.61%). This could be due to the roaming habits of male dogs during seasonal breeding where they come to close contact with infected dogs. Clinical signs in dogs with fungal infection revealed dry scaly skin lesions, erythema, crust, patchy alopecia with varying degree of itching. Besides, hyperkeratotic, thickened crusted lesions with erythema were also recorded in some cases. The lesions were commonly recorded at dorsal midline (33.23 per cent), whole body (30.51 per cent), hock joint and periorbital region (23.75 per cent), ear (12.51 per cent).

Overall prevalence of parasitic dermatitis was found to be 34.82 per cent (Fig.2). These observations were similar to the findings of Ayodhya et al. (2006) and Sharma et al. (2009) who observed 36.53 per cent and 33.33 per cent incidence of parasitic dermatitis, respectively. Season wise prevalence revealed highest prevalence in the month of July and could be due to hot and humid environment which favours the survivability of mites (Kwochka, 1987). Age wise prevalence was more in dogs of less than one year of age than the older dogs (Fig.5). Similar observations were made by Ayodhya et al. (2006). This might be due to transmission of mites from mother to pup during suckling. Lack of proper immune response in young animals may further contribute to the occurrence of lesions in these animals (Hay, 1992). Sex wise prevalence revealed that males were more susceptible (56.41%) than females (43.59%). Similar findings were reported by Aujla et al. (2000) and it could be due to higher wandering and fighting habits in male dogs (Lashkar et al., 2005) and hormonal influence. Main clinical sign in ectoparasitic infestation was pruritis. The prevalence of nonspecific dermatitis was recorded to be 14.28 per cent (Fig.2) with maximum incidence in December and minimum in October. Regarding age wise prevalence, most cases were recorded in dogs between two to three years of age group (Fig. 6). The percentage of male and female dogs affected was recorded as 56.20 and 43.75 per cent, respectively. The highest prevalence in males could be due to high wandering habits of male dogs (Lashkar et al., 2005), making them more prone to allergic reactions. The lesions recorded in non specific dermatitis were itching, licking of paws, hyperpigmentation or depigmentation, erythema, excoriation and rough hair coat. The lesions in non-specific dermatitis were mainly located at back (42.61 per cent), abdomen and groin (26.14 per cent), limbs (22.70 per cent) and tail (8.55 per cent). High rate of involvement of abdomen and groin might be because of trauma due to frequent contact with ground and hypersensitivity to pollutants on the ground. Failure of managerial practices may be the predisposing cause for the non specific dermatoses in canine (Kral and Schwartzman, 1964).

The overall prevalence of nutritional dermatosis was 7.14 per cent. In general the lesions were erythema, excoriation, crust formation, hyperpigmentation or depigmentation and rough hair coat. The skin lesions were mainly located at face (39.37 per cent), dorsum of back (29.42 per cent), limbs and tail (24.53 per cent) and abdomen region (6.68 per cent). Similar finding were reported by Gupta (2008), and the possible reason for most lesions on face could be due to thin

Alopecia, erythema, papule, thickening and wrinkling of skin with loss of texture were also recorded. The lesions were mainly located at head/neck (36.21 per cent), thorax, abdomen and groin (24.23 per cent), limbs and paws (17.00 per cent), elbow (13.27 per cent), and shoulder (9.29 per cent). The pathophysiology of pruritis is complicated and the reasons could be the release of proteolytic enzyme, histamine, leukotrienes and various peptidases (Gibson et al., 1991 and Scott et al., 1995). The high rate of involvement of head/neck in parasitic dermatitis might be due to thin stratum corneum, comparatively sparse hairs, high humidity and protection from grooming which make these areas suitable for parasitic infestation.
stratum corneum making hyperkeratinization and alopecia more evident.

References