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A STUDY ON OCCURRENCE OF RABIES*

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The current study assessed the trend of occurrence of rabies in dogs in Chennai city based on the necropsy records of the Department of Veterinary Pathology, Madras Veterinary College, Chennai over 20 years.

Materials and Methods

The study involved a total of 3,487 necropsies done on rabies suspected cases in dogs, received for diagnosis by the Department of Veterinary Pathology, Madras Veterinary College, Chennai from January 1980 to July 2000. The trend in the occurrence of rabies yearwise as well as monthwise (January to December) was studied by analysis of data. The cases in which Negri bodies were detected from the brain specimens were considered as positive to rabies.

Results and Discussion

Of the 3,487 necropsies of dogs done by the Department of Veterinary Pathology during the period 1980 to 2000 to be examined for rabies, 1,955 dogs proved positive by the presence of Negri bodies in hippocampal impression smears. With the data accrued the year wise and the mean monthwise (January to December) trend were plotted to observe any perceptible variations. Fig 1 indicates definite decline in occurrence of rabies in the year 1988; mild spurt in 1991 and thereafter a substantial drop. The monthwise (Fig. 2) occurrence has gradually peaked in January commencing from October, mildly reduced upto March and thereafter declined upto June and smaller peak was evident in July.

In this study, the occurrence of rabies has perceptible decline from 1980 to 2000. On the other hand Narayan and Konar (1986) observed that the prevalence of rabies was on increase every year in Ranchi. Intensive vaccination of canines has proven effective in reduction of rabies. In many parts of Asia the estimated overall vaccination campaign above 75% was considered necessary to break the transmission cycle (Matter *et al.*, 2000). It was observed that there were two distinct peaks in the occurrence of rabies in dogs. Several workers reported that there was no seasonal incidence in the occurrence of rabies (Tierkel, 1969). However, Parthasarathy (1981) observed an increase in March and December, while Appaji Rao *et al.*, (1983) recorded that rabies in canines was more in between December and April in Chennai City. On the other hand Basheer (1994) reported higher incidence of rabies during April to July, September and October and attributed the rise due to increased movement of dogs on account of breeding seasons. Fig. 2 in this study suggest a rising peak from October to March and a smaller peak in July possibly after the incubation period, consequent to increased movement of stray dogs and infection to domesticated

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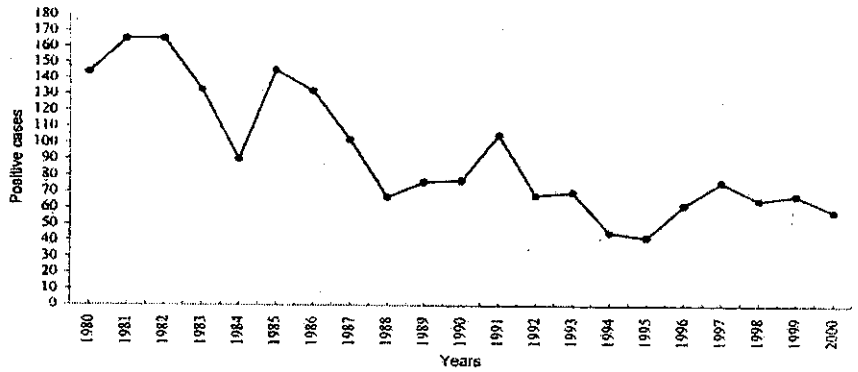

Fig. 1 Trend in occurence of rabies in canines in Chennai - India during the period 1980 to 2000

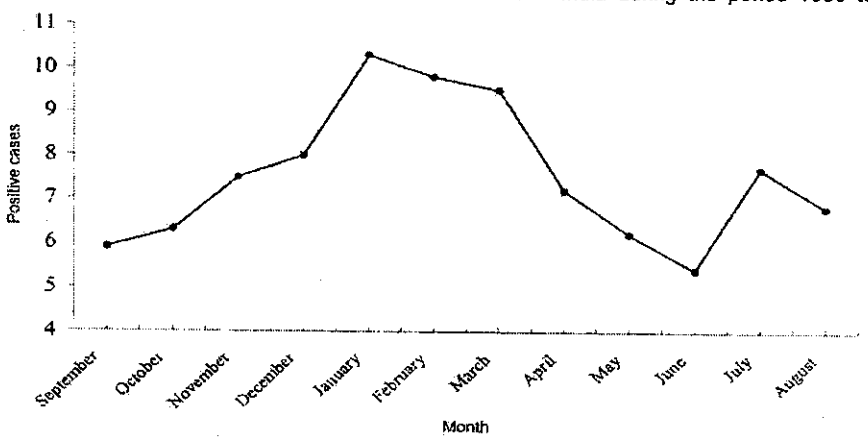

Fig. 2 Mean monthwise trend in occurence of rabies in canines in Chennai - India (1980 to 2000)

dogs during breeding seasons. The declining trend in the occurrence of rabies in dogs in Chennai over the years (1980 to 2000) could be due to collective influence of higher reduction in stray dog population and massive prophylactic immunisation of owned and stray dogs. However, the decline has stood stationary in the range from 50 to 70 positive cases during 1992 to 2000, suggesting that manifold efforts must be taken to bring down the disease to zero levels by multi disciplinary approach.

Summary

The cases suspected for rabies mitted from January 1980 to July 2001 to Department of Pathology were analysed. Season had no impact on the occurence of rabies. Control of stray dog population and prophylactic immunisation of dogs were considered to be responsible for perceptible decline in the incidence of rabies in dogs.

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