



Research Article

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Prevalence of animal bite cases in Kerman city

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Abstract

Rabies is one of the most important common diseases between humans and animals and is considered as one of health problems in the world. This study was conducted to investigate the epidemiological characteristics of animal bite cases referred to rabies prevention centers in Kerman city. The current study was cross-sectional. All registered cases of animal bites at the rabies prevention centers in Kerman were investigated during 2021. The data of the study was analyzed according to demographic and epidemiological information using descriptive and inferential statistics methods. The results of the study showed that there were 3460 cases of animal bites and its prevalence was higher in young people and males. The most common animal bites were caused by dogs. Considering the many cases of animal bites in Kerman, it is recommended to plan educational and care activities to reduce them.

Keywords: Common diseases, Animal bites, Kerman

INTRODUCTION

Animal bites are one of the most common public health problems in the world [1-3]. These problems are increasing every year [4]. The damages caused by animal bites include tissue damage, the risk of infection with aerobic and anaerobic bacteria, creating psychological problems for children such as increasing the fear of animals and nightmares, and even rarely death due to vascular injuries caused by the bite, but the biggest danger caused by animal bites in humans is rabies because it leads to death [4-6].

In addition to the physical and mental damage caused by rabies, its economic losses due to the time spent, length of treatment, disability, high cost of treatment for people bitten by animals, and damage to livestock are also important [7]. The increase in the rate of animal bites in the country has caused a lot of cost to be spent annually on the purchase of anti-rabies serum and vaccine for its treatment and prevention [8]. Thus, the present study aimed to assay the epidemiological characteristics of animal bites referred to rabies prevention centers in Kerman city.

MATERIALS AND METHODS

The present study was a cross-sectional study that was conducted in 2021 and retrospectively in the city of Kerman, Iran. It received the ethics code from the ethics committee of Shahid Sadoughi University of Medical Sciences of Yazd, Iran.

Sampling was done as a census and the files of all those who referred to the anti-rabies unit of Kerman city health centers were examined during it.

The variables of age, gender, place of residence (city or village), occupation, attacking animal type, bitten organ, rabies vaccination status and season of bite occurrence were extracted from the files.

After collecting, the data was entered into SPSS (version 25) and analyzed.

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RESULTS

In this study, 3460 cases were evaluated. 2619 patients were male (75.69%) and 841 patients were female (24.30%).

The cases of animal bites in the age group of 20-39 years were more than other ages (Table 1).

Table 1: Frequency distribution of animal bite cases based on age group

Age group (year)	Frequency	%
0-19	982	28.38
20-39	1409	40.72
40-59	788	22.77
≥60	281	8.12
Total	3460	100

Table 2: Frequency distribution of anti-rabies serum in animal bite cases

Serum therapy (hour or h) (day or d)	Frequency	%
12h>	1169	33.78
12-72h	415	11.99
4-7d	41	1.18
Total	1625	46.96

Also, most cases of animal bites were in self-employed people (31.97%).

Most animal bites were done by dogs (73.69%) in cities and around them (90.08%).

According to the season of animal bites, 23.95% cases occurred in spring, 21.04% in summer, 24.56% in autumn, and 30.43% in winter.

Investigating the outcome of people bitten by animals showed that 93.2% had recovered, 6.70% were being treated, and there was no death due to animal bites.

Most cases of animal bites were by domestic animals (67%). Most of these animals had owners (64%). Most of the animal bites were on the lower limbs and hips (34.24%). In most cases (94.47%), the vaccine had been received in less than 48 hours. Among the animal bite cases, 46.96% received anti-rabies serum (Table 2).

DISCUSSION

In the current study, 75.69% of patients were male and 24.30% were female. The most involved age group was 20-39 years. The most animal bite was related to the dogs. The most animal bite season was winter. Most of the animal bites were on the lower limbs and hips. In more cases the vaccination had been performed in less than 48 h.

The consequences of a multicentric study showed that dog bites were the source of most cases. In the mentioned study, the majority of patients were males [9]. This study was similar to the present study.

In a study in India, 76% of participants were males and above 50 % of them were related to rural parts. In 45% of patients the bite area was in the lower limbs. More patients were in the age group of 0-10 years. Dogs were the most agents related to bite [10].

Another study in Aq Qala City (A city in north of Iran) showed that the most cases were men and their majorities were resident in villages. Also, most bites were performed by dogs. More involved body areas

were legs. The maximum incidence of bites occurred in spring season [11]

CONCLUSION

According to the results obtained from this research, it seems that in order to prevent and reduce the cases of animal bites, it is necessary to provide educational and health intervention programs to animal owners, especially dog owners, with an emphasis on animal vaccination.

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Conflicts of interest

Authors declare that they have no conflict of interest.

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