



Research Article

JMR 2021; 7(4):121-123

July- August

ISSN:2395-7565

© 2021, All rights reserved

www.medicinarticle.com

Received:28-05-2021

Accepted:07-07-2021

An Investigation on the Cases of Bitten by Animals in Yazd City

Jamshid Ayatollahi¹, Seyed Alireza Mousavi¹, Sina Dehghani Tafti², Seyed Hossein Shahcheraghi¹

¹ Infectious Diseases Research Center, Shahid Sadoughi Hospital, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

² Medical Student, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

Abstract

Common diseases between humans and animals are an important public health priority. The aim of this study was to evaluate the epidemiological characteristics of animal bite referring to rabies prevention centers in Yazd University of Medical Sciences in 2018. This is a cross-sectional descriptive study. All cases of animal bite were examined in the rabies prevention center of Yazd city during 2018. Demographic and epidemiological data were analyzed using SPSS 19 software. The results of the study show that 1,750 cases of bite occurred in adolescents and males. In this study, the most common bite was in the age group of 15 to 19 (33.3%) in terms of age distribution. The most common animal was bitten by cats in urban areas. According to the bite season, the highest bite in this study was summer and the lowest in spring. Given the high incidence of bite in the province, it is recommended to plan for educational and care activities to reduce the incidence of bite.

Keywords: Bite by animal, Incidence, Yazd.

INTRODUCTION

Animal bites are a major threat to human health because some subsequent infections, such as rabies, are very deadly; Rabies is the leading cause of death among infectious diseases ^[1, 2]. In addition to tissue damage, the risk of infection from aerobic and anaerobic bacteria, the development of psychological problems for children such as increased fear of animals and nightmares, and even rarely death due to vascular injuries have been reported ^[3].

There is no global estimate of the incidence of animal bites, but according to the World Health Organization, about 11 million people receive rabies prevention treatment after animal bites each year, and about 51000 deaths from rabies are reported worldwide each year, of which 31000 cases of them are in Asia ^[4].

The highest incidence of animal bites in Iran is related to Gorgan (352 per 100,000 people) and the lowest in Sistan and Baluchestan (11 per 100,000 people). 5 cases of rabies were reported in 2014 from Fars, Kermanshah, Kurdistan, Ilam and Lorestan provinces ^[5].

The aim of this study was to investigate the cases of animal bites in Yazd in 2018.

MATERIALS AND METHODS

The present study is a descriptive cross-sectional study and is related to the 2018 animal bite statistics and retrospectively in the city of Yazd. The sampling method was census and the files of all patients referred to the anti-rabies unit of the health center of the province were examined.

The variables of age, sex, place of residence (city or village), occupation, type of invasive animal, organ of the bite site, tetanus and rabies vaccination status and the season of the bite were extracted from the information in the files.

After collection, the data were entered into SPSS software version 19 and the results were analyzed.

*Corresponding author:

Dr. Seyed Hossein
Shahcheraghi

Infectious Diseases Research
Center, Shahid Sadoughi
Hospital, Shahid Sadoughi
University of Medical Sciences,
Yazd, Iran

Email:

shahcheraghih@gmail.com

RESULTS

In this study, 1750 cases were examined, of which 1143 were male patients (65.3%) and 607 were female patients (34.7%).

Cases of animal bites at the age of 15-19 years were more than other ages. Also, animal bites were more common in self-employed people (61.1%) than other people (Fig. 1).

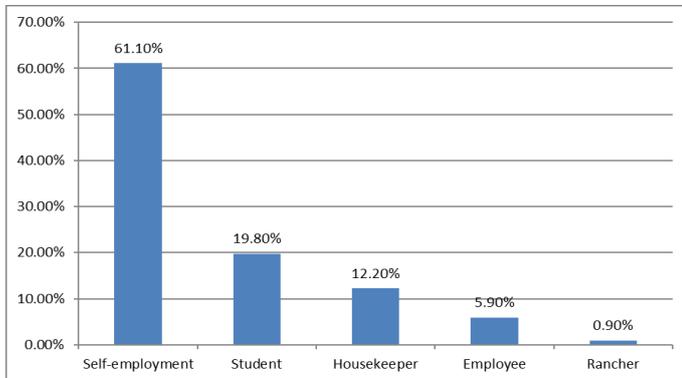


Figure 1: Distribution of animal bites based on occupation

Most animal bites were related to cats (60.4%). The upper extremities were also the most common site (72.3%) and summer the most common bite season (Fig. 2).

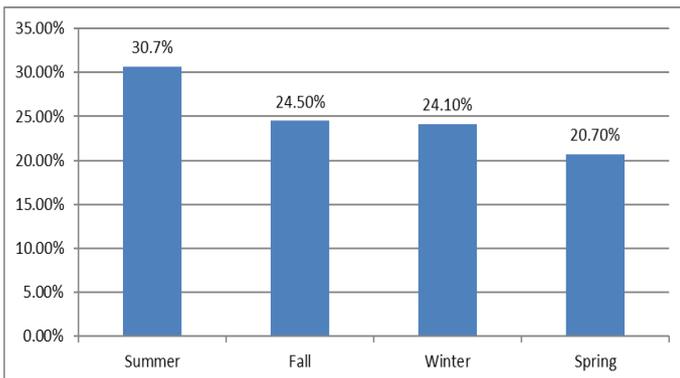


Figure 2: Distribution of animal bites based on season

There were more animal bites in the city towards the village. Among the 1750 patients bitten, 100% (1750 cases) received rabies vaccine. Of the 1,750 patients bitten, 65.7% (1,675 cases) received tetanus vaccine.

DISCUSSION

Part of the increase in animal bites may be due to population growth, but this increase is also evident in the number of animal bites standardized based on a population of 100,000 (disease incidence) [5].

Other causes of the increase in animal bites are increasing public awareness of the dangers of the disease and referring to health centers, increasing tourism, the shape of residential houses (without fences), improving the care and reporting system, and increasing anti-rabies treatment centers. The influx of stray dogs and wildlife, due to ecological changes (expansion of cities and villages, deforestation and construction of dams) to cities and villages has also been one of the reasons for the increase in cases of animal bites [5].

According to the animal bite season, the highest rate of animal bites in the present study was summer and the lowest rate was in spring. In Ali Majidpour's research, animal bites were more common in summer [6].

In the study conducted in Mashhad, most cases of rabies were in autumn and winter [7] and in the study of Ramezani *et al.* In Tehran, the most cases of rabies were observed in autumn and the lowest in summer [8], perhaps the reason for the increase in the number of animal bites in the spring can be related to the beginning of the livestock and animal husbandry season.

In the present study, most cases of animal bites were related to cats, which is consistent with the results of some studies [7, 9] and inconsistent with the results of another study [10].

In one study [11] the share of dogs was 88.8%, in one study in Aq Qala 97.8% [12] and in the next study [13] most cases were also related to dogs that do not agree with the present study. Therefore, the priority of the prevention program in Yazd should be focused on reducing the number of cat bites. Increasing public awareness can also be effective in dealing with dogs, the loss of stray dogs on the outskirts of cities and villages, not releasing herding and house dogs, identifying high-risk areas, and designing special programs for livelihoods.

In the present study, in terms of age distribution, the most cases of bites were in the age group of 15 to 19 years (33.3%). In most studies, the prevalence of animal bites in the age group was less than 30 years [5, 11, 13]. The reason is physical activity and high mobility in this age group and presence in social and recreational activities and stimulating animals.

In terms of sexual distribution of animal bites, men were 65.3% and women 34.7%. Thus, in terms of sex, the rate of animal bites in males was higher than in females. In the study of Aq Qala [12] and Tabas [14], the most common bite was related to men, which was similar to the present study. The increase in cases in men can be related to their greater presence in social and economic activities outside the home, leisure activities, sports activities and entertainment for boys and young men.

Most of the injured limbs here were the hands (upper limbs), followed by the foot, which contradicted the results of a study [9].

The occupations of the injured people were also examined in the present study. The people with freelance jobs had the highest frequency, which was probably due to the greater size of these groups among the population of the study area. The results of the present study were consistent with the results of one study [7].

CONCLUSION

Agreeing to the bite season, the highest bite in this study was summer and the lowest in spring. Given the high occurrence of bite in the province, it is recommended to design for educational and care activities to decrease the incidence of bite.

Acknowledgement

The authors acknowledge infectious diseases research center of Yazd, Iran for their aid.

Conflict of Interest

We declare that we have no conflict of interest.

Financial Support

None declared.

REFERENCES

1. Ayatollahi J, Sharifi MR, Shahcheraghi SH. Severe abdominal pain as the first manifestation of rabies. *Jundishapur Journal of Microbiology* 2014; 7.
2. Chacko K, Parakadavathu RT, Al-Maslamani M, Nair AP, Chekura AP, Madhavan I. Diagnostic difficulties in human rabies: A case

- report and review of the literature. *Qatar Medical Journal* 2016;15.
3. Westling K, Farra A, Cars B, Ekblom AG, Sandstedt K, Settergren B, *et al.* Cat bite wound infections: a prospective clinical and microbiological study at three emergency wards in Stockholm, Sweden. *J Infect.* 2006;53:403-407.
 4. Lobo DA, Velayudhan R, Chatterjee P, Kohli H, Hotez PJ. The neglected tropical diseases of India and South Asia: review of their prevalence, distribution, and control or elimination. *PLoS Negl Trop Dis.* 2011; 5.
 5. Gholami A, Fayaz A, Farahtaj F. Rabies in Iran: past, present and future. *Journal of Medical Microbiology and Infectious Diseases* 2014; 2: 1-10.
 6. Majidpour A, Arshi S, Sadeghi H, Shamshirgaran S, Habibzadeh S. Animal bites: epidemiological considerations in Ardabil province, 2002. *Journal of Ardabil University of Medical Sciences* 2004; 3 (10): 39-43.
 7. Erfaniyan M, Habibi F, Esmaili H. Animal bites epidemiology in Mashhad City 1385-1387. *Journal of Medical Science* 2009; 4.
 8. Ramazani A, Eslami far A, Islami N, Nazguny F. Epidemiology of animal rabies in Tehran (2002-2003). *Iranian Journal of Infectious Diseases* 2004; 9: 30-35.
 9. Mitmoonpitak C, Tepsunmethanon V, Raksaket S, Nayuthaya AB, Wilde H. Dog-bite injuries at the Animal Bite Clinic of the Thai Red Cross Society in Bangkok. *Journal of the Medical Association of Thailand= Chotmai het thangphaet* 2000; 83:1458-1462.
 10. Lyczak A, Tomasiewicz K, Krawczuk G, Modrzewska R. Epizootic situation and risk of rabies exposure in Polish population in 2000, with special attention to Lublin province. *Ann Agric Environ Med.* 2001; 8:131-136.
 11. Mazaheri V, Holakouie NK, Simani S, Yunesian M, Fayaz A, Biglari P, *et al.* Geographical distribution of animal bite and rabies in the Caspian Sea littoral provinces during 2002-2007. 2010.
 12. Charkazi A, Behnampour N, Fathi M, Esmaili A, Shahnazi H, Heshmati H. Epidemiology of animal bite in Aq Qala city, northern of Iran. *Journal of education and health promotion* 2013; 2.
 13. Fayaz A, Simani S, Janani A, Farahtaj F, Esfandyari B, Eslami N, *et al.* Epidemiological survey of rabies in Mazandaran Province during 1996-2006. 2010.
 14. Riahi M, Latifi A, Bakhtiyari M, Yavari P, Khezeli M, Hatami H, *et al.* Epidemiologic survey of animal bites and causes of delay in getting preventive treatment in Tabas during 2005-2010. 2012.