

Awareness of Dog Bite among People in Karachi

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ABSTRACT

Objectives: To assess the awareness, attitude and practices of people of Karachi towards dog bites.

Methods: A cross-sectional study was conducted on a sample size of 508 patients. The sample was taken through non-probability purposive sampling from Jinnah Postgraduate Medical Centre Karachi, Dr. Ruth K. M. Pfau Civil Hospital Karachi, within a period of 8 months from March 2023 to October 2023. A structured questionnaire was distributed which was filled out. Data was analyzed using SPSS Version 22 with a 95% confidence interval, the margin of error was taken as 5%, and a P-value of 0.05 was considered significant.

Results: Patient was taken to the nearby hospital 57.3% (p=0.004) yes, while no 42.7% (p=0.004). 62.4% (p=0.006) yes to wound cleaned at the hospital, while no was 37.6% (0.006). Bleeding was severe 22.4% (p=0.04) of patients said yes and 77.6% (p=0.04) replied no. wound needs stitches 11.8% (p=0.007) said yes, while 88.2% (p=0.007) said no they did not need stitches. 3.3% (p=0.009) experienced fits of patients while 96.7% (p=0.009) did not experience any fits. 2.4% (p=0.003) of people bought prescription of any expensive injection out of pocket; while 97.6% (p=0.003) of people said no. when asked if they thought the government should control the stray dogs, 94.7% (p=0.007) of people were in favor, while 5.3% (p=0.007) of people were against the idea.

Conclusion: The study showed moderate post-bite healthcare-seeking practices among dog-bite victims, with gaps in hospital visit and wound-cleaning practices.

Keywords: Dog bite, Rabies, Complication, Management, Awareness

INTRODUCTION

Dog bites are a serious and extensive public health issue that could have an impact on the victims' physical and mental health. The occurrence of dog bites in highly populated urban areas, such as Karachi, Pakistan, raises important questions about the frequency of such incidences, the amount of information regarding prevention measures, and the behavior of residents in terms of seeking medical attention.¹ This study intends to investigate the frequency and awareness of dog bites among Karachi residents in order to address these problems.

Numerous factors make it important to examine dog bite incidents. Dog bites can cause a variety of ailments, especially when they affect the face and neck, ranging from minor cuts to serious trauma, infections, and even fatalities.² For the best possible care and better patient outcomes, it is crucial to comprehend the variables influencing the severity of dog bite injuries. Geographical location, socioeconomic circumstances, and cultural practices can all have a substantial impact on the epidemiological patterns of dog bite injuries.³ As one of Pakistan's largest and most diverse cities, Karachi offers a special environment for researching the prevalence and distribution of dog bite incidences.

The probability of dog bite events is reduced to a significant extent by residents' awareness and understanding about proper pet ownership and dog bite prevention. In order to reduce the frequency of dog attacks in Karachi, public health initiatives and policies can be informed by the level of awareness and understanding.⁴

Through a complete and comprehensive review of the frequency and awareness of dog attacks among Karachi residents, this study aims to address these awareness gaps⁵. We attempt to offer a thorough overview of the issue by looking at demographic elements, regional distribution, and situations surrounding dog bites⁶. In addition, we'll evaluate how well-informed Karachi people are on how to prevent dog bites, provide basic first aid, and file the proper reports⁷.

METHODS

A cross-sectional study was conducted on a sample size of 508 patients. The sample was taken through non-probability purposive sampling from Jinnah Postgraduate Medical Centre Karachi, Dr. Ruth K. M. Pfau Civil Hospital Karachi, within a period of /8 months from March 2023 to October 2023. Informed verbal consent was obtained from the patients. A pilot study was conducted to assess the validity of the questionnaire. A structured questionnaire was distributed which was filled out. Data was analyzed using SPSS Version 22 with a 95% confidence interval, the margin of error was taken as 5%, and a P-value of 0.05 was considered significant.

RESULTS

When asked if they took the patient to the nearby hospital 57.3% ($p=0.004$) of people said yes, they took the patient to the nearby hospital while 42.7% ($p=0.004$) of people said they did not take the patient to the nearby hospital. 62.4% ($p=0.006$) of patients said yes when asked if their wound was cleaned at the hospital, while 37.6% (0.006) of patients said that their wound was not cleaned in the hospital. Similarly, when asked if their bleeding

was severe 22.4% ($p=0.04$) of patients said yes and 77.6% ($p=0.04$) replied no their bleeding was not severe. When further asked if their wound needs stitches 11.8% ($p=0.007$) said yes, they get stitches, while 88.2% ($p=0.007$) said no they did not need stitches. As far as asking about any fits, 3.3% ($p=0.009$) of patients said yes, they experience fits, while 96.7% ($p=0.009$) did not experience any fits. Upon asking if they bought or were prescribed any expensive injection, 2.4% ($p=0.003$) of people said yes; they bought an expensive injection from outside, while 97.6% ($p=0.003$) of people said no. Similarly, when asked if they thought the government should control the stray dogs, 94.7% ($p=0.007$) of people were in favor, while 5.3% ($p=0.007$) of people were against the idea.

DISCUSSION

The study is about the awareness and experience of people with dog bites in Karachi. It was encouraging to see more than 57.3% ($p=0.004$) of people took patients to the nearby hospitals but unfortunately only 42.7% ($p=0.004$) of people did not take patients to the nearby hospital⁸. If only we emphasize on taking patients to nearby hospitals immediately after the incidence of dog bite, then it would be easier to increase healthcare centers visits and hence controlling the infection earlier⁹.

It was found that awareness on the aspect of quicker and nearby hospital visits would be significantly lower in the population with lower educational background¹⁰. We got to know about this through observing our questionnaire and various sources which showed relatively higher knowledge of hospitals visits among more qualified professionals such as school teachers, nurses, and others.

It was very predictable considering the severity of the wound; around 62.4% ($p=0.006$) of patients answered yes when we inquired if their wound was cleaned in the hospital. Though a smaller but still large quantity of 37.6% ($p=0.006$) of patients told us their wound wasn't cleaned in the hospital at all. We believe etiology, pathology, and complications

should be told to people through various means to educate them about disastrous consequences of not washing the wound thoroughly in the hospital ¹¹.

When asked about severe bleeding from their wound, 77.6% ($p=0.04$) said no, while 22.4% ($p=0.04$) had severe bleeding. The bleeding could be stopped immediately. Despite more than 22% facing severe bleeding, only 11.8% ($p=0.007$) said their wound needed stitches and 88.2% ($p=0.007$) needed no stitches ¹².

Allowing people to educate themselves through various channels such as print, electronic and social media, schools, daycare centers about rising cases of dog bites in metropolitan city of Karachi would benefit millions in dealing with these cases. The lack of exposure to basic healthcare knowledge and safe practices makes a person vulnerable to even a small wound getting infected to being admitted in hospital with life-threatening infection, with children and women being the most vulnerable group ¹³. Though in our study, when asked about fits, only 3.3% ($p=0.009$) of patients said yes on having them and 96.7% ($p=0.009$) refused having any ¹⁴.

The rising cases of dog bites in Pakistan's largest city have nearly become an epidemic, especially in lower-income areas where there is no family planning, access to nearly any healthcare center or any private clinic. Taking no action by municipal cooperation poses higher risk to the public especially the young ¹⁵. There's instance when a dog bite case becomes so severe that it needs to be dealt not only with a vaccine against rabies but also with anti- sera (immunoglobulin) to be treated with. Only 2.4% ($p=0.003$) of patients admitted buying an expensive injection from medical store, and 97.6% ($p=0.003$) declined buying any ¹⁶.

The need of having empowered local government where it controls, neuter, and vaccinate dogs is need of an hour, it lies on the hands of powerful authorities to deal with this menace seriously and take back control of streets of this city, strict and necessary standards as per WHO should be taken to curb uprising of dog bite ¹⁷. It can be asserted by the

public itself as 94.7% ($p=0.007$) of people were in favor of controlling stray dogs, while only 5.3% ($p=0.007$) were not in favor of this concept.

CONCLUSION

In conclusion, the research clarifies the pressing issue of Karachi residents' awareness of dog bites. The results highlight the necessity of taking early steps to increase awareness and attitude on the cases to dog bite. It is alarming that a sizable proportion of people put themselves at risk of serious infections by delaying seeking medical care. The survey also reveals awareness gaps, with people with poorer educational backgrounds being less knowledgeable of the significance of prompt hospital visits. This implies the significance of focused educational initiatives, especially in schools and through various media channels, to guarantee that every aspect of the populace obtains crucial knowledge concerning dog bite prevention and care.

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Table 1. Distribution of Participants' Responses Regarding Post-Dog Bite Practices, Clinical Features, Treatment-Related Cost, and Attitude Toward Stray Dog Control (n = 508)

Questions	Yes (%)	No (%)	Mean	P-value	Total(n)
Did you take the patient to the nearby hospital?	57.30%	42.70%	0.57	0.004	508
Was your wound cleaned at the hospital?	62.40%	37.60%	0.62	0.006	508
Was the bleeding severe?	22.40%	77.60%	0.22	0.04	508
Did the wound need stitches?	11.80%	88.20%	0.12	0.007	508
Have you experienced any fits?	3.30%	96.70%	0.03	0.009	508
Did you buy any expensive injection? / Did the doctor prescribe any expensive injection?	2.40%	97.60%	0.02	0.003	508
Do you think government should control the stray dog?	94.70%	5.30%	0.95	0.007	508

Conflict of Interest:

The authors declare that there is no conflict of interest regarding the publication of this paper.

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Author's contribution:

Syed Tafazzul Hyder Zaidi, Kiran Mehtab: conception of the study, study design, methodology, overall supervision, data analysis, interpretation of results, critical revision, final approval, and accountability for all aspects of the work.

Hamda Asif: Contributed to study design, data collection, data interpretation, drafting of the manuscript, final approval, and accountability for all aspects of the work.

Vanesa Shamoon, Sachin Jawahar, Kashaf Naveed: Data collection, literature review, data organization, drafting of the manuscript, final approval, and accountability for all aspects of the work.

Sadaf Fatima, Hamza Fareed: Contributed to literature review, manuscript writing, formatting, final approval, and accountability for all aspects of the work.

All the authors have approved the final version to be published and agree to be accountable for all aspects of the work.



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