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ORIGINAL ARTICLE

Determinants of children with animal bite

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ABSTRACT:
Background: Viral in nature, rabies damages the central nervous system and is spread from animals to people by bites or scratches. The present study was conducted to assess determinants of children with animal bite. **Materials & Methods:** 56 children with complaint of animal bite underwent a thorough local examination. History of animal bites, type of bites, the location of the bite, the amount of time since the bite, the category of exposure, the type of wound, at-home care, management etc. was recorded. **Results:** Out of 56 children, boys were 30 and girls were 26. Animal was dog in 38, rat in 10 and monkey in 8 cases. Site was head in 9, trunk in 6, upper limbin 20 and lower limb in 21. Animal bite category found to be category III in 28, category II in 12 and category I in 16. Types of injuries was unprovoked in 5, provoked in 6, abrasion in 23, deep wounds in 17, and licking in 5. Management performed was wound toileting in 26, turmeric application in 14, salt and oil in 6 and soap and water application in 10 cases. Treatment given was active immunization in 38 cases and passive immunization in 18 cases. The difference was significant (P< 0.05). **Conclusion:** The majority of kids at the anti-rabies vaccination OPD had experienced dog bites. Abrasion, severe wounds, licking, unprovoked, and provoked were among the injury types.
Key words: Animal, Rat, Rabies

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INTRODUCTION

Viral in nature, rabies damages the central nervous system and is spread from animals to people by bites or scratches. Even though it is uncommon, rabies can be lethal if treatment is not received.[1] Children are more susceptible to contracting rabies than adults because of their smaller stature, immature immune systems, and propensity for intimate animal contact.

Most often, rabies is spread to people via the bite or scratch of an infected animal, most commonly a dog, bat, raccoon, fox, or skunk.[2] Seldom, it can also spread if contaminated saliva comes into touch with the eyes, mucous membranes, or an open cut. Children's early rabies symptoms might be vague and mimic other common ailments, like fever, headaches,fatigue, and general discomfort.[3] As the disease progresses, more specific symptoms may appear, including anxiety, irritability, difficulty swallowing, excessive salivation, muscle weakness, and neurological changes.[4]

All age groups are susceptible, however the majority of cases of rabies diagnoses—40% on average after exposure—involve people under the age of 15.[5] Prophylaxis (PEP) is given to children between the ages of 5 and 14 throughout Asia and Africa; most of the recipients are male. Children under the age of 15 account for between 30 and 60% of documented cases of rabies. Every year in India, 17.4 million individuals are bitten by animals, primarily dogs, and require post-exposure prophylaxis.[6]The present study was conducted to assess determinants of children with animal bite.

MATERIALS & METHODS

The present study consisted of 56 children with complaint of animal bite of both genders. Parents gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. A thorough local examination was carried out. History of animal bites, type of bites, the location of the bite, the amount of time since the bite, the category of exposure, the type of wound, at-home care, management etc. was recorded. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 56		
Gender	**Male**	**Female**
Number	30	26

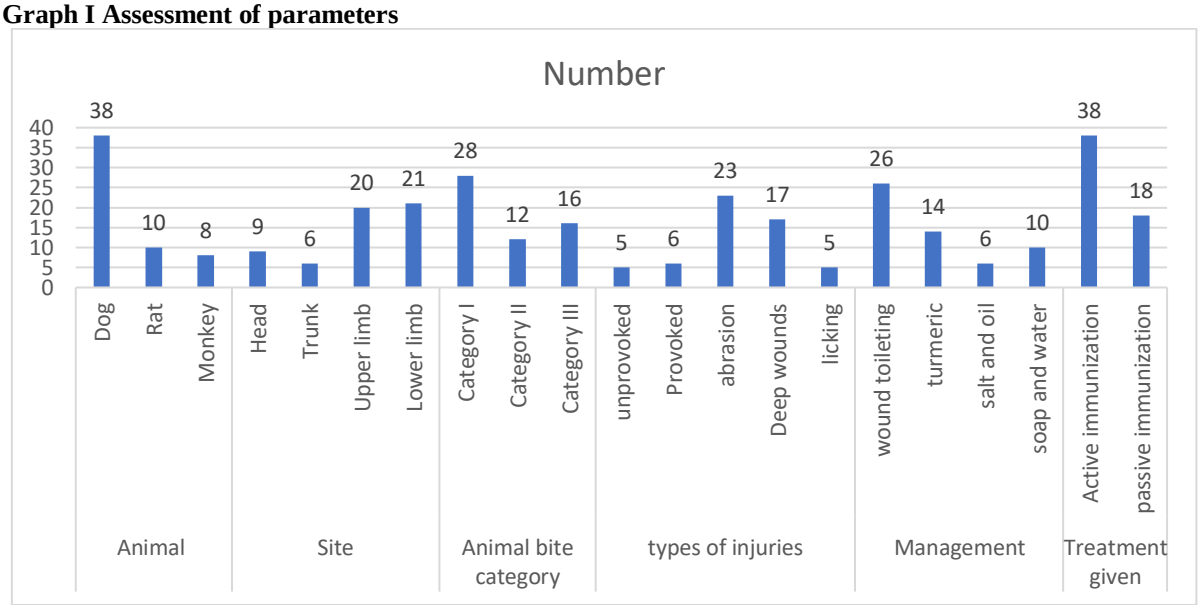
Table I shows that out of 56 children, boys were 30 and girls were 26.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Animal	Dog	38	0.05
	Rat	10	
	Monkey	8	
Site	Head	9	0.04
	Trunk	6	
	Upper limb	20	
	Lower limb	21	
Animal bite category	Category I	28	0.92
	Category II	12	
	Category III	16	
types of injuries	unprovoked	5	0.05
	Provoked	6	
	abrasion	23	
	Deep wounds	17	
	licking	5	
Management	wound toileting	26	0.74
	turmeric	14	
	salt and oil	6	
	soap and water	10	
Treatment given	Active immunization	38	0.01
	passive immunization	18	

Table II, graph I shows that animal was dog in 38, rat in 10 and monkey in 8 cases. Site was head in 9, trunk in 6, upper limbin 20 and lower limb in 21. Animal bite category found to be category III in 28, category II in 12 and category I in 16. Types of injuries was unprovoked in 5, provoked in 6, abrasion in 23, deep wounds in 17, and licking in 5. Management performed was wound toileting in 26, turmeric application in 14, salt and oil in 6 and soap and water application in 10 cases. Treatment given was active immunization in 38 cases and passive immunization in 18 cases. The difference was significant (P< 0.05).

Graph I Assessment of parameters



DISCUSSION

Diagnosing rabies in children can be challenging because the disease's symptoms might be vague and overlap with those of other juvenile illnesses.[7] Laboratory methods, such as the analysis of saliva samples, skin biopsies, or cerebrospinal fluid, are frequently used to detect the rabies virus. When symptoms appear, rabies is almost always fatal. It is very critical that a child who is suspected of having been exposed to rabies receive prompt medical attention.[8] A series of injections with rabies immune globulin and the rabies vaccination are administered as part of the treatment to prevent the virus from spreading inside the body. This drug should be administered as soon as possible after exposure, preferably before symptoms manifest.The best ways

to protect kids from rabies are through immunization and education.[9] It is especially important to make sure that children receive the necessary rabies vaccines if they live in or intend to visit areas where rabies is prevalent. Teaching children about animal safety, which includes staying away from stray animals and never approaching or handling wild animals, can also help reduce the risk of exposure.[10]The present study was conducted to assess determinants of children with animal bite.

We found that out of 56 children, boys were 30 and girls were 26.52 percent of youngsters had pet mammals in their homes, with dogs making up 67 percent of the total, according to Tepsumethanonet al.[11] Twenty-six percent of these kids reported having at least one experience with a mammal bite, either within (53.4%) or outside (46.6%) of their home. There have been reports of child bites from mammals of all ages. Nonetheless, the majority belonged to the age groups of 5–9 years (39.7%) and 10–14 years (42.3%). The most often injured areas were the hands (30.7%) and legs (56.6%). Of the children bitten, 31.7% and 68.3% had possible rabies exposures classified as WHO categories II and III (moderate and severe), respectively. Of those who had bite injury sites, 61.9% had cleaned their wounds, while 34% had not. Eighty-seven percent of the children who were bitten by mammals did not obtain any post-exposure rabies therapy, and 85.7% did not try to catch or investigate the biting animal. Merely 10.6% of the subjects kept a 10-day or longer observation log. It was shown that children in this canine rabies endemic zone are significantly more vulnerable to mammal attacks, are not receiving the best care possible, and that 50% of human rabies cases involved children under the age of fifteen.

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Thakre et al[13] evaluated the factors associated with kid bite victims. Of the 50 patients, 26 percent were female and 74% were male. Just 6% of patients came from rural areas, making up the majority of patients, or 94%, from urban areas.69% of animal bites were unprovoked, while 74% of bites fell into category III.Just 4% of injuries were licking-type wounds, compared to 72% of abrasion-type wounds and 24% of deep wounds. Maximum number of bites, or 70% on lower limbs, 20% on upper limbs, 6% on the trunk, and 4% on the head. 58% of patients completed their wound toileting, and 26% of patients reported having previously applied turmeric locally. Of the total patients, 80% had been bitten by dogs, 12% by pigs, and 6% by other animals.

The limitation the study is small sample size.

CONCLUSION

Authors found that the majority of kids at the anti-rabies vaccination OPD had experienced dog bites. Abrasion, severe wounds, licking, unprovoked, and provoked were among the injury types.

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