

Original Article

Profile of wild animal bite cases attending the ARC of MKCG Medical College Hospital, Berhampur

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Abstract

The study was conducted to assess the proportion and profile of wild animal bite cases attending the ARC of MKCG Medical College Hospital, Berhampur during the period of April 2010-March 2011. It was an observational study. A total of 6665 cases of animal bite had attended the ARC during the study period, of whom 587(8.8%) cases were exposed to wild animals. Among the wild animal-bite cases majority (44%) were in productive age group i.e. 16-45 years. One third of the cases were below 15 years of age. Lower extremity (44%) was the most common site of bite. Among the wild animals monkey accounted for 82.4% and jackal 13.6%. The other wild animals were Bear (2%), Mongoose (1.2%), Boar (0.5%) and one case was bitten by Hyena. Monkey (68%) was the commonest wild animal reported from urban area & jackal, bear, mongoose and Hyena are common in rural areas. The jackal bite cases found in the urban areas were mainly from the periphery of the city.

Introduction

Rabies is still a widespread uncontrolled killer disease of human and animal lives in the developing world. Though 85% of Rabies is due to dog bite, 5-10% are due to bite of wild animal¹. Due to urbanization and deforestation, wild animals lose their habitat jungle and come in contact with human beings. Around 60,000 human deaths are still reported world wide with 80% of them reported from Asian countries². In India more than 20,000 persons die every year due to rabies³.

Various animals that are involved in the transmission of rabies to human include wild animals like Jackal, monkey, mongoose, foxes, Hyena and Boar maintaining the Sylvatic cycle & domestic animals like dog, cat, cow etc. maintaining the urban cycle of transmission to human⁴.

A study was conducted to find the proportion, type of animal & profile of cases due to wild animal bites in ARC of department of Community Medicine, MKCG Medical College Berhampur, Odisha.

Material & Methods

It was an observational study conducted during the period 1st April 2010- 31st March 2011. Data about age, sex, area of residence, site of bite & type of wild animal was collected, compiled and analysed in the Department of Community Medicine.

Observation & Discussion

During the study period of one year, a total of 6665 number of cases had attended the ARC for anti-rabies

treatment of whom 587 of cases (8.8%) were due to bite by wild animal.

60.8% of cases were male and majority (63.6%) of cases were in the economic productive age group (16-60 years). This indicates the male sex & the productive age group are more exposed due to their outdoor activity in pursuance of earning their livelihood. 7.7% of cases were children below 5 yrs of age & 8.3% of cases were in the geriatric age group of more than 60 yrs. (Table-1).

Out of 587 bite cases 344(58.6%) were from Urban areas & 243 (41.4%) were from Rural areas.

This study revealed that cases of monkey bite were 82%. The other wild animals among the cases were Jackal (3.6%), Bear (2%), Mongoose (1.2%), Boar (0.5%) and one case of Hyena bite. Among the 344 cases from the Urban areas 330 (96%) had monkey bite. It was also observed that monkey bite was the major (96%) wild animal responsible in urban areas whereas in rural areas this animal was responsible for 63.8% of cases and this

TABLE-1
Age and sex wise distribution of patients

Age(years)	male	female	Total(%)
0-5	34	11	45(7.7%)
6-15	92	27	119(20.3%)
16-45	152	107	259(44%)
46-60	48	67	115(19.6%)
>60	31	18	49(8.3%)
Total	357(60.8%)	230(39.2%)	587(100%)

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difference was found to be highly significant ($p < 0.001$). The increased number of monkey bite cases found in the urban areas point out to the fact that due to deforestation and loss of habitat of these animals, it forces them to enter into the urban area there-by posing a nuisance for the urban people.

Similarly 28% of cases from rural areas were bitten by Jackals & it was only 3.5% among the cases from the urban area and this difference was also found to be highly significant ($p < 0.001$). The 12 jackal bite cases reported from the urban area were from its peripheral streets. (Table-2)

Table-2

Area Wise Distribution & Types Of Wild Animal

Type of wild Animal	Area		Total
	Urban	Rural	
Monkey	330 (96%)	155 (63.8%)	485(82.6%)
Jackal	12 (3.5%)	68 (28%)	80(13.6%)
Bear	0 (0%)	11 (4.5%)	11(2%)
Mongoose	2 (0.6%)	5 (2%)	7(1.2%)
Boar	0 (0%)	3 (1.3%)	3(0.5%)
Hyena	0	1 (0.4%)	1(0.2)
Total	344(58.6%) (100%)	243(41.4) (100%)	587(100%)

The major site (44%) of bite was the lower extremity. 5% of cases had bites above the shoulder area and 8.5% have multiple bites. In case of monkey bite nearly 66% of bites were over the extremities but 20% were over the abdomen & chest. The bites over abdomen and chest were mostly caused by the monkeys. Similarly the bites inflicted by the jackals were mainly over the extremities (86%). It was also revealed that multiple bites involving various parts of the body was mostly by bears which was absent in case of mongooses & other small wild animals (Table-3)

Conclusion

The present study on wild animal-bite cases reveals that they account for yearly 10% of total cases requiring post

Table-3
Site Of Bite/ Types Of Animal

Site of Bite	Type of Animal					Total
	Monkey	Jackal	Bear	Mongoose	others	
Upper limb	105 (21.6%)	33 (41.3%)	3 (27.3%)	4 (57%)	3 (75%)	148 (25%)
Lower limb	217 (44.7%)	36 (45)	2 (18.2)	2 (28.8%)	1 (25%)	258 (44%)
Abdomen & chest	97 (20%)	5 (6.3)	1 (9%)	0	9	103 (17.5%)
Above shoulder	24 (5%)	3 (3.7%)	1 (9%)	1 (14.3%)	0	29 (5%)
Multiple	42 (8.7%)	3 (3.7%)	4 (36.4%)	0	0	49 (8.5%)
Total	485 (100%)	80 (100%)	11 (100%)	7 (100%)	4 (100%)	587 (100%)

exposure prophylaxis. The cases were mainly in the economic productive age group and majority were males which indicates that this section of population are more vulnerable to wild animal bites due to their outdoor activities. So awareness regarding Rabies & primary wound care should be targeted to this section of population. This can be done by use of folk media, street plays, wall paintings etc. Monkey was the predominant wild animal found in the urban area which could be due to loss of natural habitat and food sources forcing them to enter into the urban dwellings. So for Urban-Rabies control not only dogs and cats but also monkeys should be targeted. Wild animal was still responsible for 5-10% of rabies cases and also for maintaining the sylvatic-urban cycle of rabies transmission. Therefore measures for control of rabies in the wild animals such as use of Oral Vaccine in the form of Baits dispersed in the jungles may be done for control of such a dreaded disease.

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