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Original research article

A Study on Animal Bite Cases Management in a Tertiary Care Hospital

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Abstract

Background: Estimated annual death in India due to rabies is 20,000. It is the only communicable disease of man that is always fatal. Prompt and adequate treatment of animal bite is of utmost important in the prevention of rabies. With this background the present study was conducted with the following objectives.

Objectives

1. To study the epidemiological profile of animal bite cases coming to the ARV clinic.
2. To know the time lag between biting time and attending the ARV clinic.
3. To assess the management protocol of various categories of animal bite cases.

Study design: Cross-sectional study.

Place of study: ARV Clinic of PRM Medical College & Hospital, Baripada, Mayurbhanj, Odisha.

Study subjects: New cases of animal bite attending the ARV Clinic during the study period.

Study period: March 2023 to May 2023.

Study instrument: A pre-designed pretested questionnaires.

Data analysis: It was analyzed with MS Excel.

Result: A total of 354 animal bite cases were participated. Out of them 56(15.82%) were in the age group (<14 year) and 298(84.18%) were more than 14 years. The reporting time to the health facility after animal bite, 284(80.23%) reported to the ARV Clinic within 24 hrs & 70(19.77%) reported more than 24 hrs. 109(30.79%) were Category-II & 203(57.34%) were Category-III bites. All the Cat-III bites 203(100%) had given anti rabies vaccination along with Rabies Immunoglobulin & 109(100%) of Cat-II were given intradermal vaccination only. There were no side effects among the study subjects after RIG administration. All the Cat-III bites had given the antirabies vaccines intradermally and RIG for the animal bite management on the day of their visit to the ARV clinic. During the study period antirabies vaccines and RIG were available in the ARV clinic which was free of cost for the patients. No side effects were reported among the study subjects after RIG administration.

Keywords: Animal bite, category of bite, vaccines, rabies immunoglobulin

Introduction

Inspite of rapid progress in the field of preventive medicine and vaccinology, rabies is still a wide spread killer of human and animal lives in the developing country. Estimated annual human mortality in India due to rabies is about 20,000 [1]. The fear of death linked with the bite of dog is undoubtable because of variable nature of disease. Though the stray dogs mainly transmit rabies in India, other animals like Jackle, Mongoose, Foxes, Horses, Cats, Cows & Monkies are involved in disease transmission [2]. Because of wrong belives and practices number of deaths are more even though vaccines & immunoglobulins are available to prevent death due to rabies [3, 4, 5, 6]. In this background the present study was undertaken with the following objectives.

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Methodology

It was a hospital based cross-sectional study. The study was conducted at the ARV Clinic of PRM MCH, Baripada, Maurbhanj, Odisha. New cases of animal bite attending the ARV Clinic, on the day of data collection, during the study period from March 2023 to May 2023 were the study subjects. Verbal consent was taken from each study subjects after explaining the objectives of the study. Relevant data was collected in a pre-designed & pre-tested questionnaires. Data was analyzed in MS Excel.

Observation & Discussion: A total of 354 new animal bite cases were participated in the present study. Out of them 56(15.82%) were belong to age group (<14 years) and 298(84.18%) study subjects were more than 14 years. The participants were mostly male 196(55.37%). Majority cases 232(65.54%) were from rural area & 122(34.46%) were from urban area. Among the study subjects dog bite were majority of cases 252(71.19%) followed by cat bite 84(23.7%), monkey bite 13(3.67%) cases respectively. Regarding the reporting time to the health facility after animal bite, most of the cases 284(80.23%) reported to the ARV Clinic within 24 hrs & 70(19.77%) reported more than 24 hrs. Majority of the study subjects had washed their wound either with soap & water 296(83.62%) or dettol & water 58(16.38%). Considering the wound wash timing after the animal bite 293(82.77%) within 2 hrs, very few 61(17.23%) had more than 2 hrs. 338(95.48%) had not applied anything over the wound after washing the wound, only few 16(4.52%) had applied betadine ointment. All the Cat-II bites 109(100%) had given the anti-rabies vaccines & all the Cat-III bites 203(100%) had given anti rabies vaccination along with ERIG. In all the cases RIG was administered as per the WHO recommendation with respect to dose & method of administration. ERIG was administered after doing skin sensitive test. There were no side effects among the study subjects after RIG administration [7, 8]. During the study period ERIG were available in the ARV clinic which was free of cost for the patients. No side effects were reported among the study subjects after vaccination as well as RIG administration [9, 10].

Table 1: Epidemiological Profile of Animal Bite Cases (N=354)

Variables	Response	No & (%)
Age Group	0-14 Years	56 (15.82)
	>14 Years	298 (84.18)
Sex	Male	196 (55.37)
	Female	158 (44.63)
Place	Urban	122 (34.46)
	Rural	232 (65.54)
Types of Animal Bite	Dog	252 (71.19)
	Cat	84 (23.73)
	Monkey	13 (3.67)
	Others	5 (1.41)
Category of Bite	I	42 (11.86)
	II	109 (30.79)
	III	203 (57.34)
Reporting Time	< = 24 Hrs	284 (80.23)
	> 24 Hrs	70 (19.77)
Wound Washing	Yes	354 (100)
	No	0
Wound Washing Type	Soap & Water	296 (83.62)
	Dettol & Water	58 (16.38)
Wound Washing Timing	<= 2 Hrs	293 (82.77)
	> 2 Hrs	61 (17.23)
Anything applied on wound	Betadine	16 (4.52)
	No	338 (95.48)
Treatment Given	Vaccine + RIG	203 (57.34)
	Vaccine Only	109 (30.79)
Any side effect following vaccination	Yes	0
	No	312 (100)
Any side effect after ERIG	Yes	0
	No	203 (57.34)

Conclusion

In the present study, the management of animal bites cases of Cat-II were given anti rabies vaccination. All the Cat-III bite cases were managed with vaccination along with RIG administration as per the WHO guideline. The uses of RIG was as per the WHO guideline. There was proper availability of anti-rabies vaccines & immunoglobulins in the ARV clinic. No side effects were reported among the study subjects after RIG administration.

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