

ORIGINAL ARTICLE

Epidemiological profile of animal bite cases attending Primary Health Centre, Sanquelim for Rabies PEP

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Abstract

Introduction: Worldwide India is reported to have highest incidence of rabies². With 20565 deaths reported annually, most cases are reported from rural areas. The study was a felt need at Sanquelim Primary Health Centre as it is the only PHC covering rural population of Sanquelim and ARV prophylaxis is provided free of cost at this centre.

Objectives:

1. To study the demographic profile of the patients attending the PHC for ARV prophylaxis
2. To study the type of animal bites and their category wise distribution among them
3. To assess patient compliance for 5 dose intramuscular schedule of ARV.

Methodology: The present record based analytical study was carried conducted at Primary health centre Sanquelim for a period of 6 months from March 2015 – August 2015. **Results:** A total of 276 cases reported during the study period from March-August 2015 of which majority i.e. 197 (71.4%) were males. Out of the total animal bite cases, majority i.e. 236 (85.5%) were dog bites. Majority i.e. 178 (64.5%) of the bites were seen on lower limbs. It was noticed that only half i.e. 131 (47.50%) completed entire 5 dose IM Essen schedule of ARV. None of the patients received ID regimens of ARV.

Introduction

Rabies is an acute zoonotic disease of public health and economic importance in South-East Asia¹. Rabies is attributed to animal bite which is defined as claw wound or bite due to animal². Dog bites account for 93% - 96% of all animal bites in patients reporting to the health facilities for PEP¹.

99% of the human rabies cases are attributed to canine rabies³. Globally it is estimated that around 55000 people die due to rabies. An estimated 12 million people throughout Asia receive treatment after being exposed to animals that are suspected of rabies¹. Around 21000 - 24000 deaths due to rabies occur in South - East Asia region⁴.

Worldwide India is reported to have highest incidence of rabies⁵. With 20565 deaths reported annually, most cases are reported from rural areas. While the availability of PEP has improved, it is not clear how much the rural communities have benefitted⁶.

The study was a felt need at rural Primary Health Centre at Sanquelim, Goa as ARV prophylaxis is provided free of cost at the centre and covers the rural population of around 40000.

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Objectives

1. To study the demographic profile of the patients attending the PHC for ARV prophylaxis
2. To study the type of animal bites and their category wise distribution among them
3. To assess patient compliance for 5 dose intramuscular schedule of ARV

Methodology

Study design: Record based observational study

Study Area: Primary Health Centre, Sanquelim, North Goa which is the only Health centre in the rural area of Sanquelim where ARV is available free of cost

Study duration: 6 months (March 2015- August 2015)

Study population: All patients registered for ARV prophylaxis during the study period were included in the study
 Sampling: census method

Data Analysis: Data was entered into excel worksheet (2015), transferred and analysed using SPSS version 22

Ethical approval: IEC approval from local Institutional Ethics Committee, Goa Medical College and necessary permissions from DHS were obtained for the conduct of the study.

Results:

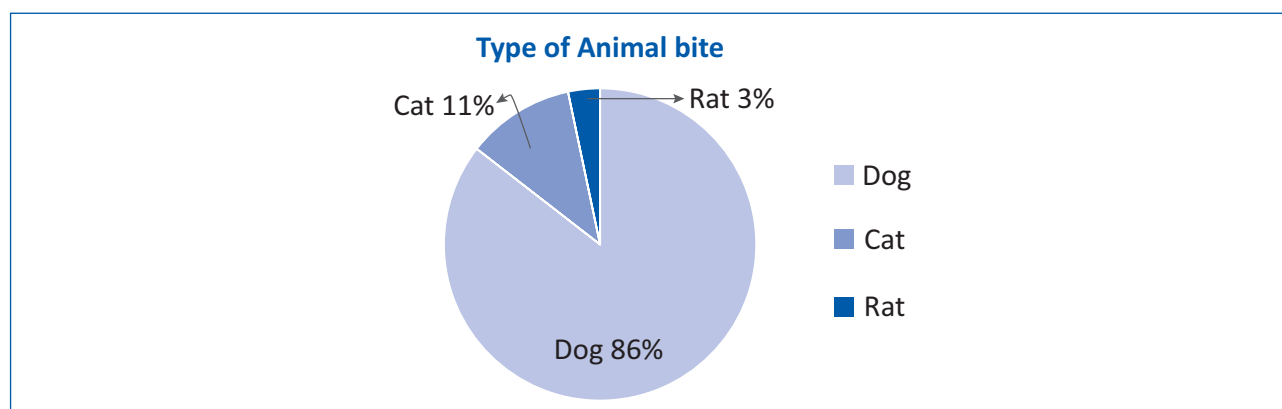
A total of 276 cases reported during the study period from March-August 2015. Majority i.e. 197 (71.4%) were males and 79 (28.6%) were females. Majority i.e. 151 (54.7%) of the study participants belonged to the age group of 15-45 years.

Table 1: Age and Sex distribution of patients with animal bites

Age group	Males(%)	Females(%)	Total(%)
0-5	20 (7.2%)	3 (1.1%)	23 (8.3%)
6-14	33 (12%)	12 (4.3%)	45 (16.3%)
15-45	108 (39.1%)	43 (15.6%)	151 (54.7%)
46-60	22 (8%)	10 (3.6%)	32 (11.6%)
>61	14 (5.1%)	11 (4%)	25 (9.1%)
	197 (71.4%)	79 (28.6%)	276 (100%)

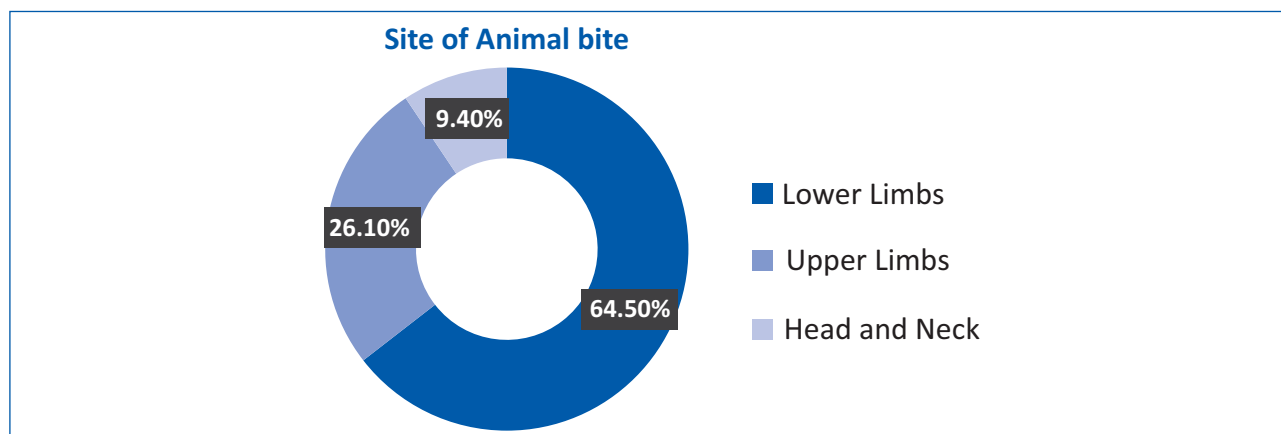
Out of the total animal bite cases, majority i.e. 236 (85.5%) were dog bites, 31(11.2%) were cat bites and remaining 5 (3.3%) were by rats.

Figure1: Distribution of cases according to the type of bite



Majority i.e. 178 (64.5%) of the bites were seen on lower limbs followed by 72 (26.10%) on upper limbs and the least i.e. 26 (9.4%) involved head and neck.

Figure 2: Distribution of patients according to site of animal bite



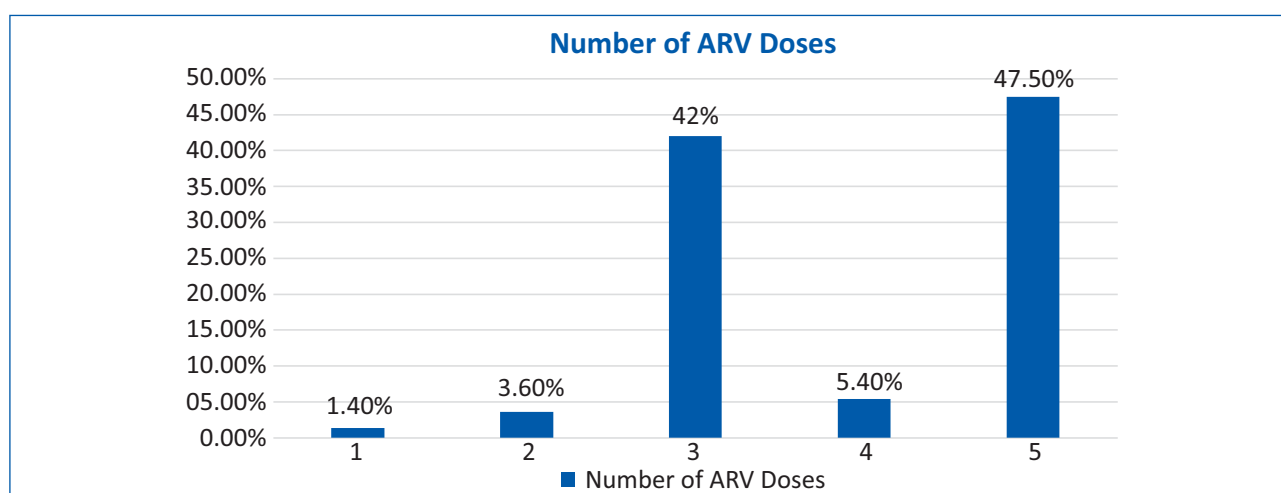
It was seen that out of the 276 animal bite cases, 10 (3.7%) belonged to category I according to the WHO guidelines, majority i.e. 164(59.3%) belonged to category II and 105 (37%) belonged to category III. Among all the age groups category II exposure was the most common, while among all the three categories of exposure were highest in the age group of 15-45 years.

Table 2: Age wise distribution of categories of animal bite for PEP

Age group	Category I	Category II	Category III	Total
0-5	1(0.4%)	13(4.7%)	9(3.3%)	23(8.4%)
6-14	0	30(10.9%)	15(5.4%)	45(16.3%)
15-45	6(2.2%)	84(30.4%)	61(22.1%)	151(54.7%)
46-60	3(1.1%)	22(7.9%)	7(2.5%)	32(11.5%)
>61	0	15(5.4%)	10(3.7%)	25(9.1%)
	10 (3.7%)	164 (59.3%)	105(37%)	276(100%)

It was noticed that only half i.e. 131 (47.50%) completed entire 5 dose IM Essen schedule of the vaccine.116 (42%) received only 3 doses, 15 (5.4%) received only 4 doses, 10 (3.60%) received only 2 doses and only 4 (1.4%) received only single dose of ARV.

Fig 3 Compliance among the patients to 5 Dose IM Essen vaccine schedule of ARV



None of the patients received ID regimens of ARV.

Discussion

In the present study majority of the study participants belonged to the age group of 15-45 years and majority were males which was similar to the study done by Bharadva N et al.⁷ Whereas in the study done by Dr Asma et al⁸ the highest number of bites were seen in the age group of less than 10 years.

Out of the 276 animal bite cases, majority (86%) were by dogs and over the lower limbs which was similar to the findings by Dr Asma et al.

In the present study in all the age groups exposure to category II was the highest whereas in a study done by Bharadva N et al⁷ category III exposure was highest.

It was noticed that only 131 (47.50%) completed entire 5 dose schedule of the vaccine. 116(42%) received only 3 doses while in a study done by Venkatesen K et al⁹ it was seen that 51.5% received more than 3 doses.

Conclusions

Dogs was the most common biting animal affecting mainly the age group of 15-45 years. Less than half of the patients complied with the entire 5 dose ARV Schedule. None of the patients were administered ID regimens.

Recommendations

Patient education regarding rabies & its prevention needs to given. Importance of completing the 5 dose schedule needs to be emphasized among the patients. There is a need for implementation for policy on WHO approved ID regimens as per National Rabies Control Program.

References

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