

## Epidemiological Profile of Animal bite cases – A Hospital based cross sectional study in Western Odisha.



### Medical Science

**KEYWORDS :** Epidemiological profile, Animal bite, Knowledge, Wound treatment, Rabies

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### ABSTRACT

*Background: Rabies is an acute highly fatal communicable disease. Most of the death occurs due to lack of awareness about the urgency of local wound treatment & vaccination of the animal bites cases.*

*Objectives: 1. To study the epidemiological profile of animal bite cases. 2. To know the knowledge & practice about local wound treatment.*

*Materials and Methods: A cross sectional study was conducted at ARV Clinic of VSS Medical College & Hospital, Burla from Sept. to Nov. 2014. The animal bite cases attending the ARV Clinic during study period were included as study subjects. Data was collected in pre-designed pre-tested questionnaires. It was analyzed with MS Excel.*

*Results: Out of 160 study subject 67% were dog bite cases. 30% cases were in age group 14-30 years. 67% were male & 75% belonged to rural area. 60% of all dog bites reported were due to stray dogs. Lower limb was the mostly bitten site comprising 42.5%. 60% were Cat-III exposure. It was known to all the study subjects that animal bite causes rabies & injections were available to prevent it in free of cost. 92% had already taken first aid washing with soap & water.*

*Conclusion: The awareness regarding animal bite case management was quite high among the study subjects, still a less number of subjects were not practiced the local wound treatment, which is a matter of concern. There is a need for imparting IEC in this regard.*

### Introduction

Rabies has affected mankind since ancient times. It ranks amongst ten most infectious diseases worldwide and causes about 50,000 – 60,000 human deaths annually although effective vaccines and immunoglobulin for post exposure prophylaxis are available.<sup>[1]</sup> In most endemic countries stray dogs are the main source of rabies infection in human. Despite of tremendous progress in the field of preventive medicine, rabies is widely prevalent in India 95 – 97 % of rabies patients are infected by dogs. Estimated annual death in India due to rabies 20000.<sup>[2]</sup> The dog population in India is estimated to be around 25 million and most of them are not protected against rabies.<sup>[3]</sup>

The fear psychosis linked with the bite of a dog is understandable because of the perfidious nature of the disease, which once sets in invariably leads to the agonizing death of the victim due to rabies. It is the only communicable disease of man that is always fatal. So people should be made aware of its treatment modalities and occurrence of disease. Prompt & adequate local treatment of all animal bite wounds and scratches is the first requisite and is of utmost importance. The present study is conducted to know the epidemiological profile of animal bite cases as well as to assess the knowledge and practice of local wound treatment.

### Materials and Methods:

It was a hospital based cross sectional study. The study was conducted at the anti-rabies vaccination clinic of Veer Surendra Sai Medical College and Hospital, Burla, Sambalpur, Odisha.

New cases of animal bite attending the ARV clinic during the study period i.e. From Sept. to Nov. 2014, were included as study subjects. Verbal consent was taken from each study subjects after explaining the objective of the study. Data was collected in a pre-designed & pre-tested questionnaire. It was analyzed using MS Excel.

### Results:

Out of 160 study subjects, majority (67%) were dog bite cases. 30% cases were in the age group of 14-30 years & 22.5% were below 14 years. Maximum numbers of cases (67%) were male and 57% were belonging to rural area. 60% of all dog bites reported was due to stray dogs. Lower limb was the mostly bitten site comprising 42% followed by 20% on upper limbs. Among all bite cases 12.5% were Cat-I exposure, 22.5% from Cat-II & 60% were Cat-III exposure. It was known to all the study subjects that dog bite could cause rabies and injections were available in free of cost to prevent it. 92% had already taken first aid washing with soap & water. 4% had

used home remedies (application of turmeric).

### Discussion:

Among the animal bite cases male were affected more (67.5%) than female, due to outdoor working which is similar to findings of previous studies.<sup>[4,5,6,7]</sup>

More number of cases (65%) were belong to 14-30 years and 31-45 years, which is the finding similar to Behera et al.<sup>[7]</sup> About 23% cases were < 14 years of age group, which was a contrast finding to studies conducted by Venu Shah et al.<sup>[5]</sup> Maximum number of cases 67% the biting animal was dog, similar to findings of studies conducted by Umarigar P et al.<sup>[9]</sup> 62.5% of dog bites were due to stray dogs. Majority of animal bite cases 67.5% cases were unprovoked bite. In a study conducted by Umarigar P et al, bites were unprovoked (81.2%) cases.<sup>[9]</sup> More number of cases (45%) were bitten during morning may be because of moving for their routine work. As per the site of bite is concern lower limb was mostly bitten (42.5%) cases findings similar to other studies.<sup>[4,5,6,7]</sup> Cat-III bite was reported in maximum number of cases (60%) which is similar finding to other studies.<sup>[4,5,6,7]</sup> In a study by Umarigar P et al the predominate bite was Cat-II.<sup>[9]</sup>

Only 10% cases had history of previous animal bite and all of them were completely vaccinated. Regarding pre-exposure prophylaxis, only 2.5% had taken pre-exposure prophylaxis because of their high risk of exposure.

Majority of cases (92%) had history of wound washing with soap & water. On the contrary 9.37% cases had no history of wound washing, which is a major issue of concern. 85% of cases had received first dose of ARV within 24 hours of exposure, which is in accordance with other studies.<sup>[9]</sup>

All the Cat-III bites were taken immunoglobulin along with vaccine. The awareness regarding local wound treatment and animal bite case management cases were quite high. Animal bite causes rabies and it is fatal, was known to every study subjects. For its management vaccines are freely available in Government hospitals were known to all. This finding was just contrast to the findings of Kakrani VA et al.<sup>[10,11]</sup>

### Conclusion:

The dogs were the main biting animal affecting mostly adults. Though the awareness regarding various aspects of animal bite was very high still a less number of cases had not practiced local

wound washing, which is a matter of concern. IEC activities can encounter such things.

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