

**Title:** PROFILE OF THE DOG BITE VICTIMS ATTENDING ANTI-RABIES CLINIC, KING GEORGE HSOPITAL, VISAKHAPATNAM, ANDHRA PRADESH

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**Keywords** Rabies, Dog bite, Category of bites, Vaccination, Visakhapatnam

**Abstract** Rabies is a highly fatal Zoonotic disease present on all continents with the exception of Antartica, but more than 95% of human deaths occur in Asia and Africa. Once symptoms of the disease develop, rabies is nearly fatal. 10 million people around the world received post exposure prophylaxis out of which 10-15% from India alone.

## Original Article

## PROFILE OF THE DOG BITE VICTIMS ATTENDING ANTI-RABIES CLINIC, KING GEORGE HOSPITAL, VISAKHAPATNAM, ANDHRA PRADESH

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### Abstract

**Background:** Rabies is a highly fatal Zoonotic disease present on all continents with the exception of Antarctica, but more than 95% of human deaths occur in Asia and Africa. Once symptoms of the disease develop, rabies is nearly always fatal. 10 million people around the world received post exposure prophylaxis out of which 10-15 % from India alone. The present study was conducted to understand the profile of Dog bite victims visiting the Anti Rabies Vaccine clinic at King George Hospital Andhra Medical College, Visakhapatnam.

**Materials and Methods:** Study design : Descriptive study.

Study setting : ARV clinic, Visakhapatnam.

Sample size : All the new cases who attended K.G.H during the period June 2013 to May 2014.

Study tool : Pretested semi-structured questionnaire.

**Results:** A total of 3882 new cases were reported. Victims attended the clinic from all the areas, in and around Visakhapatnam. Majority were reported from Jalaripeta, Maddilapalem, Poorna market, Kancharapalem areas. Males were the common bite victims (66%) when compared to Females. Majority of them in the age group of 10 to 29 years. Lower limb (64.3%) was the most common site exposed to animal bite followed by upper limb. Category III bites were more in number. Majority of cases were reported during the months of February and March and least in the month of July-August.

**Key words :** Rabies, Dog bite, Category of bites, Vaccination, Visakhapatnam.

### Introduction:

Rabies is a highly fatal Zoonotic disease occurring in more than 150 countries and possesses a threat to more than 3.3 billion people worldwide. According to the World Health Organization, every year about 55,000 people die of rabies in Asia and Africa<sup>1</sup>. In India alone 20,000 deaths are estimated annually<sup>2</sup>. Rabies in dogs is the source of infection in 96% of human infections. Human infection with rabies is nearly always secondary to animal bite or through small cuts, abrasions, scratches and contamination of mucous membranes by licking of the rabid dog. Rabies in humans is 100% preventable through prompt appropriate medical care. 10 million people around the world received post exposure prophylaxis out of which 10-15 % from India alone<sup>3</sup>. Post-exposure prophylaxis (PEP) consists of local treatment of the wound, initiated as soon as possible after exposure, a course of potent and effective rabies vaccine that meets WHO recommendations; and the administration of rabies immunoglobulin, if indicated<sup>1</sup>.

Anti rabies vaccine clinic at King George Hospital attached to Andhra Medical College a tertiary care center is catering its services to Dog bite exposed victims and the study was conducted to understand the profile of Dog bite victims visiting the ARV clinic.

### Materials and Methods:

A descriptive study was done at the ARV clinic, run under the control of Dept. of Community Medicine, Andhra Medical College, for a period of one year from June 2013 to May 2014. A total of 3882 new cases of Dog bites were reported during the study period. Data was analyzed using Microsoft excel. Results were expressed in terms of percentages, means, and proportions. Variables like Age, Sex, Place of Dog bite, Category of the dog bite, Administration of Immunoglobulins were studied. Category of bites is being done as per WHO classification for categorization of dog bites.

Category I – Touching or feeding animals, licks on intact skin.

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Category II – Nibbling of uncovered skin, minor scratches or abrasions without bleeding.

Category III- Single or Multiple transdermal bites or scratches, licks on broken skin.

**Results And Discussion:**

A total of 11089 bite victims reported to the ARV clinic out of whom 3882 were new cases. On an average 14 new cases per day was reported. Among the study population Males were the common bite victims (66%) when compared to Females.

Age distribution ranged from 1 year to 80 years of Age with mean age of Males was 22 years and Females was 25 years. Majority of the bite victims were in the age group of 10 to 29 years. In a study conducted by Nitheshkumar and B.Kiranmai at Urban slum, Hassannagar<sup>4</sup> found that majority of the victims were in the age group of 21 to 30 years. Studies by Renu Bedi et al and Jairaj Singh Hanspal<sup>5</sup> had found that more than half of the dog bite victims were in children below 10 years of age.

**Place Wise Distribution of Dog Bites:**

Victims attended the clinic from all the areas, in and around Visakhapatnam. Majority of the cases were reported from the Jalaripeta, Maddilapalem, Poorna market, Kancharapalem, Maddilapalem, Relliveedhi and Seethamadhara in a descending order.

Majority of cases were reported during the months of February and March and least in the month of July-August.

A study done by Mohd Junaid et al in Maharashtra<sup>6</sup> showed the Maximum number of the bites occurred in

the month of May-June and least number of victims were reported during November.-December.

As lower limbs are more accessible to dogs, majority of bites (64.3%) were on the lower limbs followed by upper limbs, Chest and abdomen, head and neck in a descending order.

Similar results were found in study conducted by **TR Behera et al<sup>7</sup>**, Sampath G<sup>8</sup> where Lower limb was the most common site exposed to animal bite followed by upper limb.

The dog bites are classified according to the World health organization classification.

Majority of them were Category III bites and 12% i.e. 466 cases were Category 1 bite. King George Hospital being a tertiary care hospital most of the victims were category III representing a tip of ice berg. A study done by Mohd Junaid et al in Maharashtra<sup>8</sup>, Manish Kumar Singh in Lucknow<sup>9</sup> showed similar results in terms of categorization of dog bites.

**Mode of Vaccine Administration:**

A modified Thai regime is followed while administrating the Anti rabies vaccine. It consists of two injections of 0.1 ml of World Health Organization recommended tissue culture rabies vaccine intradermally at two sites on days 0, 3, 7 and at one site on days 28 and 90<sup>10</sup>. Immunoglobulins were administered to category III victims at the site of the bite at free of cost.

**Conclusions:**

Majority of the dog bite victims were active adolescent and adult male population with age distribution between 10 to 39 years. Victims reported

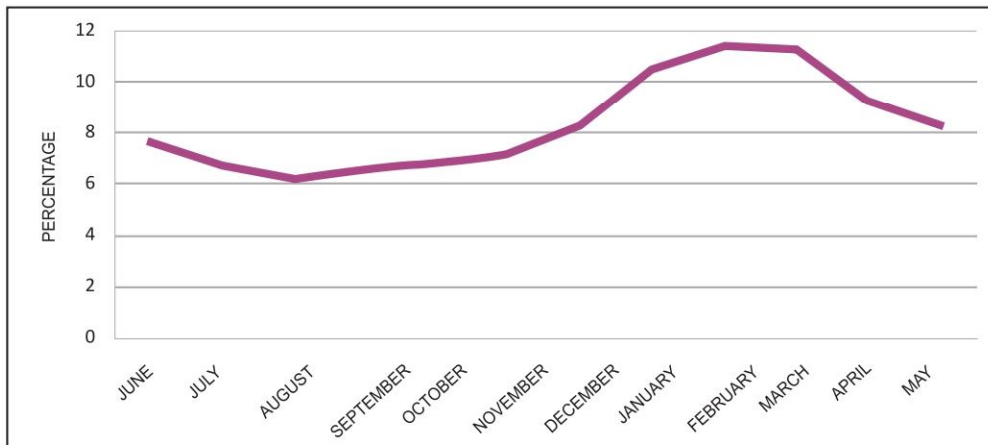


Fig. 1 : Distribution of cases according to time

**Table : I**  
Distribution of Cases According to The Site of Bite

	Number	%
UPPER LIMBS	1223	31.5
LOWER LIMBS	2496	64.3
CHEST AND ABDOMEN	94	2.4
HEAD AND NECK	23	0.6
MULTIPLE SITES	46	1.2
TOTAL	3882	100.0

from all places surrounding Visakhapatnam, out of which majority were from Jalaripeta, Maddilapalem and Poorna Market. Regarding the time trends, there was a constant number of dog bites being reported throughout the year, peaking at February and March. Category III bite victims were more in number and all received immunoglobulins in addition to the anti rabies vaccine.

#### Recommendations:

There is an urgent need to curtail the number of the stray dogs in and around Visakhapatnam especially in places like Jalaripeta, Poorna Market and Maddilapalem. There should be constant surveillance on the stray dogs as the psychological morbidity will never equals to the money spent by the government in terms of drugs distributed after the rabid dog bite.

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**Table : II**  
Distribution of Cases According to Categories of The Dog Bite

	Number	%
CATEGORY I	466	12
CATEGORY II	1165	30
CATEGORY III	2251	58
TOTAL	3882	100

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## Announcement

**The APCRI Journal is published twice a year. Once in January and again in July. The APCRI Journal invites Contributions from the Scientific Community, on All aspects of Rabies and Related Matter, in the form of Original Articles and Review Articles, Brief Reports, Case Reports, Personal Viewpoint, Letters to the Editor, Notes and News, Your Questions and Book Review.**

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