

**Title:** AN ANALYSIS ON LATE REPORTING OF ANIMAL BITE VICTIMS TO THE ARC OF MKCG MEDICAL COLLEGE, BERHAMPUR

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**Keywords** Late reporting, Category III Animal Bites

**Abstract** Following exposure of bite victims to a suspected rabid animal, the prevention consists mainly of prompt wound treatment, administration of modern cell culture vaccines and Rabies Immunoglobulin in Category III bites. This modality of treatment at the ARC clinics is directly depended on the right time of reporting of bite victims to the nearest ARC clinic.

## Original Article

## An Analysis on Late Reporting of Animal Bite Victims to the ARC of MKCG Medical College, Berhampur

(Paper Awarded APCRI Young Scientist Award 2009)

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### ABSTRACT :

**Background :** Following exposure of bite victims to a suspected rabid animal, the prevention consists mainly of prompt wound treatment, administration of modern cell culture vaccines and Rabies Immunoglobulin in Category III bites. This modality of treatment at the ARC clinics is directly depended on the right time of reporting of bite victims to the nearest ARC clinic. Time of reporting and hence starting the right treatment is a crucial factor in prevention of Rabies

**Methods:** Setting: ARC Clinic of MKCG Medical College hospital, Berhampur

**Study period :** January2008- December 2008

**Participants :** 1497 late reported cases out of total 5026 cases who attended the ARC clinic during the study period

**Results :** Out of 1497 late reported cases, **569(38%)** reported after 24hrs and up to 5 days, **479(32%)** reported after 5 days and up to 7 days, **329(22%)** reported after 7days and up to 1month and **120(8%)** reported after 1 month or more. The reasons for late reporting were **Dog alive, healthy and traceable (62%)**, bite inflicted not taken as severe for **treatment (12%)**, **Bites by cats, mongoose and other domestic animals (17%)**, **Irregular treatment started by some Quacks/ Traditional healers (4%)**, **Taking out poison of dog bites by witchcraft (2%)** and **only vaccine taken under the advice of Medical Practitioners and no advice on RIG administration (3%)**

**Key Words :** Late reporting, Cat III Animal bites

### Introduction:

Rabies is a 100% fatal disease and it can be prevented by Post exposure Prophylaxis. Following exposure of bites victims to a suspected rabid animal, the preventive step consists of prompt wound treatment, administration of cell culture vaccine and RIG's, in Category III bites. Time of reporting and hence starting the right treatment is a crucial factor in prevention of rabies.

The ARC clinic of MKCG Medical College Berhampur is an apex health institution and referral centre for south Orissa and neighboring districts of Andhra Pradesh. Cell culture vaccine (IDRV) and Rabies Immunoglobulin are provided free of cost by Government. Sometimes cases report late and so the treatment is also started late. So a research for Analysis of these late reported cases was required to know the root causes of late reporting, so that some steps can

be taken to bring them (the patients) early and make the patients and their family members realize the importance of prompt initiation of post exposure treatment in Animal bite cases.

### Objectives:

1. To study the time of reporting of bite victims to the ARC clinic
2. To study the reasons for late reporting
3. To assess the source of information for reporting and the treatment taken prior to reporting at the ARC clinic

### Methodology:

**Setting:** ARC Clinic of MKCG Medical College hospital Study period- January2008- December 2008  
**Participants:** 1497 late reported cases out of total 5026

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cases who attended the ARC clinic during the study period

**Results & discussion:**

Out of the Total 5026 cases who attended the ARC clinic during the one year period, 4674 (93%) were of Cat III bites, 251(5%) were Cat II bites and the rest 101(2%) were Cat I bites. Late reporting was taken as those cases who reported after 24hrs of exposure. Out of total 5026 cases, 1497 (29.8%) cases reported late.

**Table - 1**  
Time of Reporting of late reported cases(n=1497)

Time	Number (%)
After 24hrs upto 5days	38%
After 5 days upto 7 days	35%
After 7days upto 1 month	22%
After 1 month	8%

In our study maximum late reported cases reported from 24 hours to less than 5 days and a large number of cases also reported after 5 days. Studies conducted by Renu Bedi et al<sup>1</sup> also found that knowing the disease is fatal still about 49.8% of the animal bite victims reported after 24hrs and a similar finding by Khokkar et al<sup>2</sup> found that 31.03% reported after 24hrs which is an important finding. A Study by Sampath<sup>3</sup> says that Education and Awareness also plays an important role in reporting of cases. The reporting should be early to take any step for the prevention of Rabies.

**Table - 2**  
Causes of late reporting

Reasons	Percentage
Animal alive and traceable	62%
Bite inflicted not severe and not taken serious	12%
Bite by cat and pet domestic animals	17%
Irregular treatment taken by quacks	4%
Witchcraft	2%
Only vaccines and no RIG	3%

**Majority of cases (62%) reported late because the animal was alive and looking healthy and traceable.** 12% of the cases did not regard the bite as so severe but they were unaware that a lick over a open wound and bite with oozing of blood can both cause rabies. Sometimes a myth is present among people that if the animal has bitten by its teeth only, then only treatment is needed, and if one is

scratched by the animals nails then they don't take it so seriously. 17% of the cases reported late as they were bitten by cats and by a pet mongoose , pet unimmunized dogs. Studies done on behaviour of animals shows that most cat bites are the result of fear<sup>4</sup> on the cat's part or a phenomenon known as **petting-induced aggression**. Petting-induced aggression is a behavior in which a cat that has been apparently enjoying contact with a human suddenly turns on the human and bites. This behavior appears to be more common in cats that had no contact with humans during their first seven weeks of life.

In our study 4% of the cases went for treatment from an untrained practitioner who never gave a proper antirabies treatment. Sometimes doctors also are not aware about the proper treatment of Cat III bites. 2% of the cases went to witchcraft as they relate rabies with some magical power of God and always thought that witchcraft could cure this disease. 3% of the Cat III cases were given only vaccine and RIG was not advised or RIG was not available. In a study by U.S. Singh et al<sup>5</sup> in the rural community of Gujarat, only 36.4% people would come to a doctor for treatment & 19.2% did some religious customs and 13.3% did nothing.

Studies done by P. Siviah and Mahendra BJ et al<sup>6,7</sup> says that One of the reasons for Rabies deaths is the improper, inadequate and incomplete post-exposure rabies prophylaxis by medical professionals. This is attributed to low level of awareness about anti-rabies treatment amongst medical doctors. The medical doctors, particularly the general practitioners / family physicians who treat the majority of dog bites are often unclear and confused and hence provide inappropriate advice or treatment, which has sometimes resulted in development of rabies and death of the patients.

**Table - 3**  
Source of information for Reporting though late

Source of Information	Percentage
From other bite victims of village who took treatment	64%
Tingling sensation and local symptoms	16%
Patient died/history of rabies in village	12%
Animal died	7%
Onset of rains/monsoons	1%

These cases, though they reported late, reached the apex health institution for treatment. The source

of information for the arrival at hospital needs to be analyzed. 64% of the cases heard from other bite victims from the same village or from a nearby village who took treatment from our ARC, and may be a **Fear of Death** in Hydrophobia made them to poke into matters of other ways of treatment and then they realized it should be treated and reported late. 16% of the cases had some form of local symptoms starting from non healing of wounds and tingling sensation may be real or psychological which made them to come to the hospital. When the biting animal died, in some cases i.e. 7% came for treatment feeling that now the animal has died so the disease would have affected them too. A myth is always found on the community regarding the onset of the disease when rains or monsoons come, making 1% of the cases feared about the disease so they came for the treatment before that. A study in Iran<sup>8</sup> underlines the importance of animal bites and rabies in Iran. Rabies vaccination is frequently used in Iran and imposes a heavy financial burden on the country's economy. In Iran, the number of reported animal bites has increased dramatically from 66,370 in 1987 to 183,000 in 1997. The increase might in part be due to the improved reporting system due to the expansion of health centers to almost all rural areas. The results of this study reflect the potential dangers of animal bite and risks of contracting rabies in Iran concluding that the different aspects of the disease should be highlighted in health education activities.

**Table - 4**  
**Treatment taken prior reporting to the ARC**

Treatment taken Prior to the ARC	Percentage
Local washing of wound	45
Taken at ARC irregularly	29
Application of herbal treatment	24
Traditional healers	2

Washing of the wound removes 99% of the virus load. But this practice is not still developed among people and they apply some local herbs and plant juices. In our study, only 45% had washed the wound before reporting which is a good habit. Washing of the would must be done irrespective of the time since bite, as the rabies virus can persist and even multiply at the site of bite for a long time. However, care must be taken not to disturb scabs if formed. In addition, tetanus prophylaxis, analgesics & anti bacterial treatment/antibiotics may be given. By mere washing of wounds & application of antiseptics, the risk of rabies will reduce by about 50%<sup>9</sup>.

29% of the cases came to the ARC but irregularly, and did not stic to any recommended schedule. 24% of the people had applied some herbal treatment for the wound and no such vaccine taken and 2% of them went to the traditional healers who made the wound worse by cutting it again and applying some form of magical spells. A study in Uganda<sup>10</sup> estimates that in the absence of post-exposure prophylaxis (PET), deaths would occur, as 41% of patients did not complete their course of PET.

WHO Rabies survey by APCRI<sup>11</sup> says that only 39.5% of bite victims washed the wounds with soap and water and about 46.9% took anti-rabies vaccination and compliance to the full course was about 40.5%. However, the use of RIGs was low (2.1%). The local applications to wound (36.8%) and indigenous remedies (45.3%) were quite popular. The main source (59.9%) of treatment was Government sector.

**Conclusion**

- Majority were Category III cases
- 29.8% of the cases reported late
- Majority reported late after 24hours to 5days
- 8% reported more than a month after the incident and without any treatment- risk factor
- Dog alive was the main cause on non reporting followed by irregular treatment by Quacks
- Other causes were bite by domestic animals, only vaccine advised and no RIG in Cat III cases and some believed on "Jhadh phoonk" [witch craft].
- Though reported late the source of information was from other dog bite victims in the village, some patient died of Rabies nearby, some reported after the animal died and some came after some local symptoms developed.
- Treatment prior to reporting at the ARC was local wound washing, irregular ARC visits, and some herbal treatment and by Traditional healers

**Recommendation**

- Awareness creation at the rural areas regarding early reporting of cases
- Surveillance system For animal bite cases and to be incorporated in separate Registers at sub centre and PHC level
- Early reporting saves the patient with correct treatment- take home message for all dealing with animal bite patients

- Proper Referral facilities where treatment is not available
- Advising Use of RIG and more trainings and campaigns for proper RIG administration. More Awareness programmes on RIG infiltration
- No animal bite case to be taken lightly by the grass root level health providers.

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## ANNOUNCEMENT

**The APCRI Newsletter is published every six monthly, in October and in April. APCRI members and the members of the Scientific Community are requested to contribute News Clippings, Photographs and Reports on Scientific activity on Rabies and Related matter for publication in the Newsletter.**

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