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# **Research Article**

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# Assessment of knowledge about rabies in interns of Geetanjali medical college, Udaipur

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#### **ABSTRACT**

**Background:** Rabies is one of the zoonotic diseases. Dogs are the main reservoir of Rabies in India but it can cause by any rabid carnivores bite. The untreated, improperly treated or neglected cases lead to sure death. Rabies can be prevented through proper management by vaccination, serum and immunoglobulin but once disease occurred it is always fatal. Objectives: To assess the knowledge regarding rabies and its preventive measures among the interns.

**Methods:** It was a cross-sectional study conducted in January 2014 to March 2014. Data was collected using preformed questionnaire from 100 interns of Geetanjali medical college, Udaipur.

**Results:** It was seen that only 59% knew that vaccination of dogs was an essential preventive measure, 80% and 68% agreed that pre-exposure vaccination and educating the people regarding pre- and post-exposure prophylaxis were useful, respectively. Also 89% and 59% were aware that wound should be washed immediately and antiseptics should be applied, respectively. 50% and 29% were not aware of the schedule and dose of the PEP, respectively. Only 35% knew about both IM and ID route of administration of PEP. Only 66% were aware that the site of administration of PEP is deltoid.

**Conclusions:** The study showed that there was lack of proper knowledge in interns about the prevention and management of rabies which needs to be proper training and proper education.

Keywords: Zoonotic disease, Rabies, Post exposure prophylaxis

# INTRODUCTION

Rabies, is a nearly 100% fatal zoonotic infection of humans and other mammals affecting the central nervous system, is caused by a virus of the Lyssavirus genus of the Rhabdoviridae family. India, except the Union Territory of Lakshadweep and Andaman and Nicobar islands every states have rabies cases. National Multicentric Rabies Survey (2004) with the Association World Health Organization for Prevention and Control of Rabies reported 20565 deaths occur from rabies per year in India. However, in India there is no organized system for surveillance of rabies cases, therefore the actual data on the number of cases is actually much higher. In India, about cases are due to dog bites are in majority in

reference the less accountable due to, cat bites, due to other animals like jackal, monkey, panther, cow, goat, pig, mongoose, rat etc.<sup>2</sup> A WHO report on the animal experiments shown that the local wound treatment tends to reduce rabies incidence up to 80%.<sup>4</sup> Hence, it becomes important that medical professionals have adequate knowledge related to the cause and the preventive measures of rabies to avoid the disease.

#### **METHODS**

Present study was a cross-sectional study was conducted in January 2014 to march 2014 among 100 intern students of Geetanjali medical college, Udaipur. Data was collected using preformed and pretested anonymous questionnaire. First of all proper verbal consent was taken prior filling out the questionnaire format. The all participant inters had the right to withdraw their names at any stage of data collection. Data was interpreted and analyzed with the help of Microsoft excel, 2007 and SPSS v16.

### **RESULTS**

Present study revealed that 94% of interns was aware of the viral cause of rabies only 6% don't know about it .on the other hand 64% interns know about rabies caused by rabid carnivores bite like dogs, jackal, panther etc., but 32% of interns fill the answer of only dog bites could cause rabies. Similarly 95% of interns know the correct mode of transmission which is via bites, licks and scratches of rabid animal. However, only 27% of interns know the correct incubation period of rabies. Likewise, 64% on the interns know the exact mode of vaccination which is by intra dermal or intramuscular, 34% fill only the intramuscular mode but only the 31% of interns knows about the exact doses of vaccination and serum/immunoglobulin on the other hand 83% of interns know the correct schedule of vaccination. Similarly, 69% of interns know correctly that anti-rabies serum and immunoglobulin are used in category III bites (Table 1 and 2).

In the present study on the assessment of knowledge of interns on preventive measures it was found out that 75% knows about vaccination of dogs could prevent rabies. 92% knows about pre exposure vaccination is preventive from rabies. Similarly on the wound care management 94% knows the immediate wash of the wound is necessary and 89% knows about the antiseptic application to the wound or site. Similarly 76% knows about do not suture the wound immediately and only 62% of interns knows about cauterization of wound (Table 3 and 4).

Table 1: Distribution of interns according to their knowledge about rabies.

Knowledge		Interpretation	Number of respondents
1.	Causative agent	Virus	94
		Others	03
		Don't know	03
2.	Reservoir of infection	Dogs	32
		Dogs and other animals	64
		Don't know	04
3.	Modes of transmission (multiple answers)	Bites, licks, scratches of the infected animal	95
		Inhalation	05
4.	Incubation period	Correctly knows	27
		Don't know	73

Table 2: Knowledge of interns regarding post exposure prophylaxis.

Knowledge		Interpretation	Number of respondents
		IM	34
1.	Mode of vaccination	IM/ID	64
		Don't know	02
2.	Serum /	Cat II	28
	immunoglobulin used in category	Cat III	69
		Don't know	03
3.	Correct dose of vaccine and serum / immunoglobulin	Correctly knows	31
		Don't know	69
4.	Schedule of	Knows	83
	vaccination	Don't know	17

Table 3: Knowledge of interns regarding preventive measures (multiple answers).

Domain	Yes	No	Don't know
Vaccination of dogs	75	25	00
Elimination of rabid animal	83	17	00
Pre exposure vaccination is helpful	92	04	04
People education	78	14	08

Table 4: Knowledge of interns regarding wound care management (multiple answers).

Domain	Yes	No	Don't know
Immediate wash	94	01	05
Antiseptic application	89	04	07
Sutures	21	76	03
Cauterization	62	27	11

#### DISCUSSION

Rabies is 100% fatal zoonotic disease which can be preventable by pre and post exposure prophylaxis in the form of anti-rabies vaccination and anti-rabies serum and with the administration of immunoglobulin, but once contracted the disease is invariably fatal.<sup>5</sup> In our present study out of total 94% of interns were aware of the viral cause of the disease which was near to a study done by Nayak RK et al. 2011 in Belgaum, India. Similarly in present study 64% of the participants were aware that not the dog only one is the reservoir of the infection which was not in resemblance to a study by Jasleen, Padda AS et al. done in Amritsar medical college where only 11% were knew about it.<sup>7</sup> In our study 95% know about mode of transmission of rabies but only 27% interns know incubation period which was very less in compare to a study done in Karachi in 2007 by Shah SF et al. where data was 51.7%.8 In our study, 25% were not aware of the vaccination of dogs and 22% not aware about educating people about the pre & post exposure preventive

measures can prevent rabies. However, 92% were aware that Pre-exposure vaccination is recommended in high risk population and 83% aware that elimination of the rabid animals is a useful intervention.

A previous study done in interns by Chowdhury R et al. 2012 found that only 10% know vaccination can be both intra dermal and intra muscular in contrast our study shows 64%, this previous study reports 77.5% regarding antiseptic use, 83.8% regarding suturing, and 75% regarding cauterization whereas in our study the data was 89%, 76% and 62%.

#### **CONCLUSION**

This study was done for highlight the fact of knowledge regarding a disease which is severely fatal and inadequate treatment is dangerous to life, in interns of the tertiary care hospital where the study was undertaken. It was also revealed that the knowledge of the interns regarding prevention and management of rabies was not adequate. This implies the fact that interns are lacking in practical exposure. Animal bites cases are frequently reported at all government or private hospitals in India and this lack or low level of knowledge among medical professionals leads to loss of lives which may be saved. This, most commonly happens when, either the first line treatment providers are just with no practical exposure or may be due to inadequate knowledge. So, teaching hospitals should have arrange proper training for interactive animal bite at clinic visits for students, may be CMEs to address specific knowledge gaps in them. This may help in practical exposure, reduce public health burden of rabies and also help in reducing the health care budget on vaccines and immunoglobulin resulting from improper

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 $institutional\ ethics\ committee$ 

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