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Study on Time Lag between Exposure and Starting of Treatment of Animal Bite Cases Attending an Anti-Rabies Clinic at A Tertiary Care Centre

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Abstract: Rabies is invariably a fatal disease. Appropriate wound treatment and prompt rabies post exposure prophylaxis (PEP) are of great importance to rabies prevention. Time of reporting & hence starting the right treatment is a crucial factor in prevention of rabies. To study the time of reporting of animal bite case to the ARC Clinc, To find out the reason for late reporting of animal bite case to the ARC –OPD, To suggest the recommendation to address the issue. This study was conducted at Anti-Rabies Clinic of S. M. S. Hospital, Jaipur. During the period 1st January to 28th February 2017.Total 1731cases reporting in the time gap of more than 24 hour in the ARC OPD during this period were taken as study subjects. The data were entered and compiled in Microsoft excel which were further analyzed using SPSS version 24. Out of total 1731 cases, most common age group of animal bite was 40-49 years 30 percent followed by 10-19 years 18.1 percent. Category 3rd animal bite was 90 percent most of the cases 63.5 percent had reported to the ARC-OPD in the time gap of more than 72 hours.the most common cause of delay reporting was other engagement. Moreover, 18.6 percent of the cases were not aware that vaccine has to be taken as soon as possible. The most common cause of delay was their engagement in other work which was followed by their unawareness about importance of vaccination at time.
Keywords: Animal bite, rabies, lags time.

INTRODUCTION

Rabies is one of the deadliest diseases of mankind, and has terrified since antiquity. It is 100 per cent fatal, however, 100% preventable [1]. Despite it, rabies remains a neglected and under reported zoonotic disease in human and animal untreated on time [2]. Nearly 99 % of all human rabies victims attributed to canine rabies which is continues to terrify 87 countries or territories of the world [3]. More than 99% of all human rabies deaths occur in the developing world [4].It is estimated that South East Asia Region accounts for approximately 60% of human death due to rabies in the world [1]. In India, alone rabies causes an estimated 20,565 deaths with 17.4 million exposures to animal bites, mainly dog bites, occurring every year [5]. In India a person is bitten by an animal in every 2 second and someone dies from rabies every 30 second [6]. Following by a suspected rabid animal,the preventive step consists of prompt wound treatment, administration vaccine (with or without rabies immune globulin [RIG] depending upon the type of exposure) should be initiated immediately after a suspected rabid bite. Recommended first-aid procedures include immediate and thorough flushing and washing of the wound for a minimum of 15 minutes with soap and water, as well as disinfecting the wound with detergent or other substances of proven lethal effect on the rabies virus. Appropriate wound cleansing and disinfection can prevent one-third of rabies infections [7-9]. Modern cell-culture vaccines utilized in combination with RIG are nearly 100% effective in preventing human deaths if inoculated promptly to rabies virus-exposed victims following appropriate wound management [10].Time of reporting & hence starting the right treatment is a crucial factor in prevention of rabies [11]. This study aimed to evaluate the cause of time lag between exposure and starting of treatment of animal bite cases

attending an anti rabies clinic at a tertiary care centre, S.M.S. Medical college and attached hospital Jaipur.

OBJECTIVES

- To study the time of reporting of animal bite case to the ARC Clinc.
- To find out the reason for late reporting of animal bite case to the ARC –OPD
- To suggest the recommendation to address the issue.

MATERIALS & MRTHODOLOGY

Study setting

This study was conducted at Anti-Rabies Clinic of S. M. S. Hospital, Jaipur which is one of the largest Anti Rabies Clinic in India. This clinic was started in the year 1947 under Department of Preventive and Social Medicine in SMS Hospital, Jaipur. The clinic now records an average of 8100 cases annually. This clinic is run by 1-2 faculty members from department of community medicine and 3 staff nurses. The clinic is also used train MBBS interns and postgraduate students on rotatory basis.

DATA COLLECTION METHODS

This study was conducted at Anti-Rabies Clinic of S. M. S. Hospital, Jaipur. During the period 1st January to 28th February 2017.Total 1731cases reporting in the time gap of more than 24 hour in the ARC OPD during this period were taken as study subjects. The data collected included following information.

- Socio-demographic variables
- Variables related to wound.

The data were entered and compiled in Microsoft excel which were further analyzed using SPSS version 24.

Ethical Clearance

All information collected in the present study was a part of routine services existing ARV clinic S.M.S Hospital Jaipur. An informed verbal consent was obtained from the care givers of deceased individuals. The information gathered from interviewees was kept confidential. This was a secondary data analysis; hence, ethical approval was obtained after completion of the study from the Institute Ethics Committee of S.M.S Medical College and Attached Hospitals Jaipur (reference No. 3447 MC/EC/10/10/2017).

OBSERVATIONS AND DISCUSSIONS

Table-1: Socio-demographic profile of animal bite cases (n -1731)

S.No	Socio-demographic variable	Number	Percentage
	Age in Years		
1	0-9	122	7.1
2	10-19	312	18.1
3	20-29	171	9.8
4	30-39	260	15.1
5	40-49	520	30.0
6	>50	346	19.9
7	Total	1731	100
	Sex		
1	Male	1281	74.0
2	Female	450	26.0
3	Total	1731	100
	Residence		
1	Rural	1268	73.3
2	Urban	463	26.7
3	Total	1731	100
	Education status		
1	Illiterate	260	15.1
2	Primary	695	40.1
3	Secondary	432	24.9
4	College	344	19.8
5	Total	1731	100
	Occupations		
1	Unskilled	831	48.0
2	Semiskilled	605	34.9
3	Skilled	224	13
4	Professional	71	4.1
5	Total	1731	100
	Income		
1	<5000	1091	63.1
2	5000-10000	432	24.9
3	>10000	208	12
4	Total	1731	100

Out of total 1731 cases 30 percent were in the age group of 40-49 years .Most of the delayed reporting cases were males 74 percent. People come from rural area were 73.3 percent followed by urban are 26.3 percent. Education status was up to primary education in 40.1 percent of the cases. Monthly income was less than 5000 per month in 63.1 percent cases. Majority of them 48 percent were unskilled workers. In a study conducted by sampath.G says educations and awareness plays an important role in reporting of cases [12].

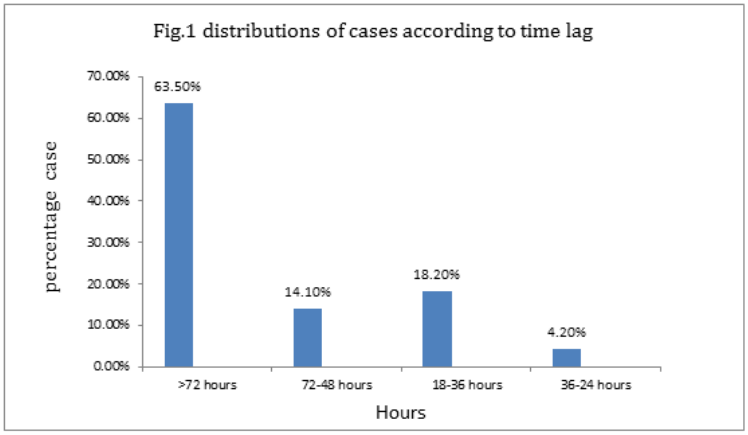

Fig.1 Show 63.5 percent cases had reported to the ARC-OPD in the time gap of more than 72 hours,14.1 percent cases within 72-48 hours,18.2 percent cases within 48-36 hours and 4.2 percent of the cases after 24 hours. In a study study conducted by Renu Bedi et also found that the disease is fatal still about 49.8percent of the animal bite cases reported after 24 hours[13] .In similar study conducted by Khokkar et al found that 31.03% cases reported after 24 hours[14].From among all of the reporting late to the ARC OPD most of the 90 percent belong to category 3rd followed by 10 percent belonging to category 2nd .Reason behind cat.3 case more compare 2 due to SMS medical college is tertiary care centre so referred case more come for serum.Serum in sms medical college free of cost available .

Table-2: Reasons for the delay in reporting to anti rabies clinic for rabies PEP (n=1731)

S.No	Reasons for the delay	Number	Percentage
1	Busy in other works	1038	59.9
2	Traditional healer	176	10.1
3	Due to other illness	140	8.0
4	No self awareness	322	18.6
5	Long distance	55	3.1
6	Total	1731	100

Most of the cases, 59.9 percent could not to report to the ARC Clinic immediately after the animal bite as they were busy in other work,18.6 percent of the cases were not aware that vaccine has to be taken as soon as possible .10.1 percent had traditional healer.8 percent of the cases could not come in time to the ARC OPD as they were suffering from other illness.3.1 percent were come from long distance so they could not report the ARC-OPD. In a study conducted by D.shobha Malalni *et al*. majority of the cases 62 percent reported late because the animal was alive and looking healthy and traceable[11].

CONCLUSION AND RECOMMENDATIONS

The most common cause of delay was their engagement in other work which was followed by their unawareness about importance of vaccination at time. poor educational status and poverty was also a contributing factor for delay in reporting .Although, the awareness about the need for vaccinations, after animal bite for preventing rabies has been established in the community ,but the concepts that it is required to be started as soon as possible after the animal bite, has not created till now.

Awareness has to be created among the population that vaccination has to be done immediately following animal bite to prevent rabies. The importance of timely reporting of animal bite cases to the ARC has to be discussed while treating cases of animal bites. Capacity building and training of the grass root level workers regarding importance of early reporting and prompt treatment of animal bite cases is the need of the hour.

Limitations

Since the subjects included in the study were patients attending tertiary care centre hospital study findings cannot be generalized to the whole population at large. To get more insight for assessing burden and

epidemiology of the animal bite, community based studies are needed.

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REFERENCES

1. WHO. Prevention and control of rabies in South-East Asia Region: Word Health Organization, Regional Office for South East Asia, New Delhi, SEA-Rabies; 23 July2004.
2. WHO Regional Office for South East Asia, New Delhi. Rabies Elimination in South-East Asia. Report of a Workshop Colombo, Sri Lanka, 10-12 November 2005. WHO Project: ICP BCT001. Available from http://apps.searo.who.int/PDS_DOCS/B0329.pdf.
3. http://rabies.org.in/rabies/wp-content/uploads/2009/1/Operational-Guidelines-forRabies-Prophylaxis-and-Intra-Dermal- Rabies-Vaccination-in-Kerala.pdf .Accessed on Oct 23rd, 2015
4. Gadekar Rambhau D. and DhekaleDilip N. Profile of Animal Bite Cases in Nanded District of Maharashtra State, India. Indian Journal of Fundamental and Applied Life Sciences 2011. 1(3), 188-193.
5. Ichhpujani RL, Bhardwaj M, Chhabra Mala, Datta KK. Rabies in India. Coumtry Report, 4th International symposium on Rabies control in Asia Vietnam. March 2001;35.
6. Manazee R. Rabies in India CMAJ. 2008; 178(5): 564-8.
7. Kaplan MM, Cohen D, Koprowski H, Dean D, Ferrigan L. Studies on the local treatment of wounds for the prevention of rabies. Bulletin of the World Health Organization. 1962;26(6):765.
8. Dean DJ, Baer GM, Thompson WR. Studies on the local treatment of rabies-infected wounds. Bulletin of the World Health Organization. 1963;28(4):477.
9. Wilde H. Failures of post-exposure rabies prophylaxis. Vaccine. 2007 Nov 1;25(44):7605-9.
10. Quiambao BP, Dimaano EM, Ambas C, Davis R, Banzhoff A, Malerczyk C. Reducing the cost of post-exposure rabies prophylaxis: efficacy of 0.1 ml PCEC rabies vaccine administered intradermally using the Thai Red Cross post-exposure regimen in patients severely exposed to laboratory-confirmed rabid animals. Vaccine. 2005 Feb 25;23(14):1709-14.
11. D.Shobha Malini, DM. Satapathy, RM. Tripathy, An analysis on late reporting animal bite case to the ARC of MKCG Medical college, Berhampur, APCRI Journal.vol.12,issue1,July 2010
12. Sampath G, post exposure treatment, APCRI Journal, 2004.
13. Bedi R, Bedi DK, Tankha A, Choudhary V, Matoria RS. Profile of animal bite cases attending Anti Rabies Clinic of JLN Medical College & Hospital, Ajmer. APCRI Journal. 2006;VIII(1):28-30.
14. Khokhar A, Meena GS, Mehara M. Profile of dog bite cases attending MCD dispensary at Alipur, Dehli. IJCM, 2003; 28(4):157-60.