



A Research Manifestations of human rabies cases that admitted in infectious disease hospital AIIMS, NEW DELHI

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ABSTRACT

Background; Rabies is a communicable diseases of man(humans) may always be fatal but its always but easily preventable disease,if animal bites are appropriately and timely managed . Once person appears signs and symptoms of rabies, the disease probably causes death. In accordance to this reason, probability anyone who may have a risks of contacts rabies should be receives rabies vaccinations for protection(Immunization).It is estimatimation that cases in india started continues to reporting every year 40,000 to 50,000 human rabies death.The objectives for this study was to describe the clinical epidemiological characteristics (features) of the human rabies. Rabies in majority of cases is a deadly virus spreads to people from the saliva of infected animals. The rabies virus is casually transmitted through a bites. The rabies virus when spread occur that infects the central nervous system (CNS) of mammals, ultimately leading to a disease in the brain and death may occur. Death usually persists or occurs till **3 to 10 days after symptoms starts begin**. Few patients are survived; many started receiving immunoprophylaxis of the before onset of symptoms occurrence . There is evidence that gives rabies vaccine and immune globulin after clinical rabies developed that cause more rapidly deteriorations.

Methods; Analysis the records of probable rabies cases admitted into infectious disease Hospital ,AIIMS NEW DELHI during 2020-2023.

Results; Total 790 human rabies cases were admitted during the study period .Majority (76.33%) of the victims were between 14-55 year of age. Males constituted 80.40% of cases and victims from rural area were 92.65% .principal biting animal was dog (90.29%) .Majority of the cases (72.96%) were not vaccinated. Most of cases (90.40%) left against medical advice within 24 hours after admission. If the disease that progressed, the person started experiencing **delirium, abnormal behavior, hallucination, hydrophobia and insomnia**. This acute period(phase) of disease that ends after 2 to 10 day. If clinical signs of rabies appearing, the disease is always fatal, and treatment is required typically supportive management.

Conclusions; Rabies is a majority of cases that lead to serious health problems in the part of india. Rabies should be considered to one of the world's most important zoonosis, but it can be neglected disease. It is **violent and 100% fatal, may be no cytopathic effect** ,

demonstrated minimal inflammation.The data recognition that there is much to do for migration of the crux of the problems is the epidemiological trend that has not effect too much. The National Rabies Control Programmed has been approved to address(to express) the problem of rabies in country during the 12th Five or Six Year Plan as Central Sector Scheme to be implement under the Umbrellas of NHM with the two component - Humans and Animals Component .Hence there is immediate need to educate the communities and health workers for the importace of adequate post-exposure treatment. Prevention to follow up the strategies are critical to better managed rabies in endemic areas.

INTRODUCTION

Rabies is a viral disease always occurs due to transmission by an animal bite carrying the infections. Rabies is also known as hydrophobia. Without initial stage of treatment, it is may be fatal.It has a RNA virus of the rhabdovirus family which can affect the body in one of two different ways. It may enter to the peripheral nervous system (PNS) directly lead to migrate to the brain. It start replicate within muscles tissue, where it is protect or safe from the host immune system. After that it enter to the nervous system through the neuromuscular junction.If it inside the nervous system, the virus ma affect and started produces an acute [inflammation](#) of the brain. [Coma](#) and death may occur.

Mainly there are two types of rabies. The first type is encephalitic rabies, occurs in 70-80% of human cases, and a person more likely to experienced hyperactivities and hydrophobia. The second type known as paralytic or “dumb” rabies that causes paralysis like symptoms.

Rabies said to be vaccine preventable zoonotic viral disease that mainly affects the central nervous system. Once clinical symptom started appearing the rabies is virtually 100% considered to be fatal. In up to 90-99% of cases, seen that domestic dogs are mainly responsible for rabies virus transmission to human. Rabies can affect major in both domestic and wild animals. They can started spreads to people and animals through saliva, usually bites, scratch or direct contact with mucosa (e.g. eye, mouth or open wound). Children considered between the age of 5 and 14 year are frequent victim.Rabies are present majority all continent except Antarctica, over 95% of human death occurring in Asia and Africa. But the rabies cases are reported and registered number that differ from the estimated burden.Rabies is consider one of the neglectable tropical disease that predominantly affects marginalized, poor ,vulnerable population. It may be effective human vaccines and immunoglobulin that exist for rabies, these are not readily accessible to those need. Managing the rabies exposed, consider the average cost of rabies post-exposure prophylaxis is currently estimation at an average of US\$ 108 (with the travel cost and loss of income) can be catastrophic financials burdened on affected family whose averages daily income as low as US\$ 1–2 per persons .Every year greater than 29 million people worldwide receives a PEP. This is estimation to prevention of hundreds of thousands of rabies death annually. The economic burdened of dog-mediated rabies is basically estimated at US\$ 8.6 billion per year in addition to remain uncalculated psychological trauma for individual and communities.

Two country India and Bangladesh belong to the highest incidence category (WHO 1999). In country of India rabies is present throughout , exept in the island of Lakshadeep, Andaman and Nicobar. It is estimated that country india continue to reported every year 40,000 to 50,000 human rabies death , with Incidence at rate of 1.7 per 100,000 population which account 60% of global report of 60,000 deaths.But atual number of deaths 10 times more than those reported.The annuals animal bite load I estimation to 19.2 million(1.9%) and 49.6% takes anti-rabies vaccination.Main biting animal is considered to be a dog (92.2%). The dog population is estimated in india country around 25 million.

In the recent times many changes that takes place in the country the modern vaccines imported at initial stage in 1970s and then manufactured indigenously both in public and private sectors . Rabies is almost consider fatal disease, but it can be easily preventable disease if animal bites are timely managed. Despites the trial with various antivirus agents, no therapy of proven value if the disease is manifested. Proper care of wounds, adequate post-exposure treatment with modern TCV with RIG (when it is indicated) according to the WHO guidelines it can prevent the disease amongst the majority of the person exposure to rabid animals. Descriptive types of the study was done retrospectively to visualise the clinic-epidemiological characteristic of the rabies victim that is admitted in Infectious Diseases Hospital , AIIMS, New *Delhi* of 2020-2023.

METHODS

Infectious Diseases Hospital, AIIMS, New *Delhi* is situated **Uttar Pradesh** and it is common practice for the physician of this area to refer rabies cases to this hospital. Rabies cases are also referred from other areas of **Uttar Pradesh**. Hospital records of 790 cases of rabies (having hydrophobia) admitted to the ID, AIIMS, New *Delhi* Hospital , during period from January 2020 - 2023 were analyzed retrospectively. The Diagnosis of human rabies was made on basis of clinico-epidemiological , hence it is probable cases that none had laboratories confirmation of diagnosis. Clinical case sheet had data on age, sex, date of admission, place of bite, type and name of the animals, duration between bite and development of symptom, type of symptoms, post exposure vaccination, administration of vaccine after animal bite, fate of animal.

RESULTS

Table 1 showed that human rabies cases were more among males (80.40%) than females. Overall adult age group (14 to 55 years) was found to be most vulnerable (76.33%) whereas least number of cases (7.34%) were from elderly people (>55 years). It can be similarly observed from the Table, that more rural people suffered from rabies (92.65%) whereas urban people were at low risk (7.35%). It was also evident from the table that Hindus suffered more from the disease (91.22%), while Muslims were suffered very less (8.78%).

It was evident from Table 2 that 790 (90.29%) of human rabies cases were victims of dog bite whereas only 28 (5.71%) of cases were from other animal bites. The fate of (93.67%) biting animal was not known as victim or their relatives did not observe them. Only 18 (3.67%) biting animals were still alive at the time of admission to IDH. The present study also showed that only 1.22% of biting animal were known vaccinated.

Table 1; Biosocial characteristics of rabies patients (N=790)

Characteristics	Number	Percentage
Male	709	83.47
Female	81	16.53
Age (in years)		
<14	244	29.38
14-55	510	63.26
>55	36	7.34
Residence		
Rural	754	92.65
Urban	36	5.71
Religion		
Hindu	747	91.22
Muslim	43	8.78

Table 2; Profile of biting animal (N=490)

Characteristics Percentage(%)	Number	
Type of animal		
Dog	762	94.29
Others(Cat/Monkey/ Jackal/wild animal)	28	5.71
Fate of animal		
Dead	13	2.65
Alive	18	3.67
Not known	759	
93.67		
Vaccinated	6	1.22
Not vaccinated /not Known	784	98.78

Table 3; Seasonal variation in human rabies cases (N=790)

Months Percentage	Number	
January-April	256	31.84
May-August	286	37.96
September-December	248	30.20

Table 4; Disease characteristics and post bite vaccination (N=790)

Characterstics	Number	Percentage(%)
Incubation period		
<One month	267	34.08
One-six months	487	58.57
>six months	36	7.35
Duration of stay in hospital		
<24 hours	749	91.63
24-72 hours	33	6.78
>72 hours	8	1.63
Disease symptoms		
Hydrophobia	790	100.00
Aerophobia	609	63.06
Violent behavior	14	2.86
Post bite vaccination		
No vaccination	682	77.96
Vaccinated	74	15.10
Not known	34	6.94
Fate of patient		
Died in hospital	32	6.53
Left hospital in	758	93.47
Critical conition		

DISCUSSION

Our study showed that human rabies cases were more in males (80.40%). Similar findings were observed in other studies. The trend was probably because men were more exposed to animal bites due to their outdoor activities for their occupational compulsion. It was obvious

from the present study that adult age group (14 to 55 years) was found to be most vulnerable (63.26%). It can be similarly observed from the present, that more rural people suffered from rabies (92.65%) whereas urban people were at low risk (7.35%), which was similar to the findings who also mentioned that rural people were most at risk showing maximum number of victims (89.4%) of all cases. So, it was distinct that stray dogs were playing major and vital role in the transmission of rabies. The present study showed overall no significant seasonal variation, as frequency of rabies cases admitted was almost same though out the year. This result is almost similar to study conducted in Kolkata, India. It was clearly depicted in our study that maximum number of cases (58.57%) showed incubation period of 1-6 months. It was evident from our study, that 77.96% human rabies cases had not received any antirabies vaccine at all. Only 15.10% cases had undergone fully or partially anti-rabies vaccination. These findings were supported by the report of Mahendra et al who mentioned that there were no anti rabies vaccination in 64% of the cases. Only few patients died in the hospital whereas majority of patients left the hospital in critical condition against medical advice after learning about the fatal outcome. This finding was an agreement with the findings of study conducted in Bangladesh which showed that 4.1% rabies cases died in hospital, where as 96.8% left against medical advice.

CONCLUSION

The Majorities of the human rabies deaths that occurred in adult males from rural areas. The goal of animal responsible for rabies transmission was dogs. Post exposure prophylaxis with rabies vaccination was very low. More numbers of human rabies death occurred within six month of dog bites. Rabies is a disease which cannot be controlled until it will be fought at multidisciplinary approach. Efforts are needed to improve hospital care and management of human rabies patients. The goal of Education about the knowledge of the cause of disease is prime importance. First aid of wound toileting is of utmost significance. However coverage of modern rabies vaccines and rabies immunoglobulin require to be improved. If an urgent need to tackles the menace of stray dogs populations, is an effective municipal licensing of the pet dog that requires awareness campaign for better and responsible animals bite care and management practices.

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REFERENCES

- 1- Knobel DL, Cleaveland S, Coleman PG, Fevre EM, Meltzer MI, Miranda ME, et al. Re-evaluating the burden of rabies in Africa & Asia. Bull World Health Organ.
- 2- Singh US, Choudhary SK. Knowledge, attitude, behaviour and practice study on dog bite and its management in the context of prevention of rabies in a rural community of Gujarat. Ind J Com Med 2005.
- 3- Sudarshan MK, Mahendra BJ, Madhusudana SN, Ashwoath Narayana DH, Rahman A, Rao NS, et al. An epidemiological study of animal bites in India: result of a WHO sponsored national multi-centric rabies survey. J Commun Dis. 2006.
- 4- Center for Disease Control and Prevention- United States, 1999: Recommendations of Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep. 1999.
- 5- WHO expert committee on rabies. World Health Organ Tech Rep Ser. 1992.