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ASSESSMENT OF FREQUENCY OF THE PATIENTS VISITING DOG BITE CENTER FOR RABIES VACCINATION

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Abstract:

Background: *Rabies is one the highly infectious disease of the central nervous system. The causative organism is Rabies LYSSA virus type-I. It is also known as Hydrophobia. Primarily it is a zoonotic disease of mammals. The reservoir and transmitters of the disease are carnivorous animals such as cats, dogs, monkeys, wolves and bats also. The disease in humans majorly spread through saliva of the rabid animals. Other body secretions and urine of the rabid animals are also source of rabies virus.*

Objectives: *To understand the pathogenesis of the disease rabies and be able to manage this problem most effectively. To be able to avoid preventable deadly complications of this disease. To give awareness about right treatment and remove wrong concepts among the public about this highly fatal disease.*

Material and Methods: *Descriptive cross-sectional. The study was conducted among the people visiting the rabies center. Duration of study within 1 month. A computer software statistical package for social science (SPSS) version 22.0 was used for data entry and analysis. Frequency and percentages were calculated were calculated for categorical variables and data was plotted into tables and graphs.*

Results: *of cases, 63.3% have no knowledge of time peroid of vaccine adminstration while 36% have. 60% have no knowledge of sign and symptoms of rabies while 40% have. 60% cases seen in village.93.3% involved animal is dog while 5% cat and 1.7% any other.70% have knowledge of saliva, blood and abraded skin contact by animal cause rabies while 30% have not. 81.7% have treatment information in form of injection while 8.3% in form of medicine and 10% don't know.*

Conclusion: *Knowledge of dog bite and associated disease is average among the people visiting the rabies center for vaccination. Majority do know the importance of the medical assistance after the dog bite but their economical status makes it difficult for them to gain access to a good hospital or dog bite center. Only few clanged to the older methods of application of homemade paper bandage or seek help from a spiritual healer.*

Keyword: *Rabies, Vaccination, Knowledge, Dog bite.*

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INTRODUCTION:

Rabies is one the highly infectious disease of the central nervous system. The causative organism is Rabies LYSSA virus type-I. It is also known as Hydrophobia. Primarily it is a zoonotic disease of mammals. The reservoir and transmitters of the disease are carnivorous animals such as cats, dogs, monkeys, wolves and bats also. The disease in humans majorly spread through saliva of the rabid animals. Other body secretions and urine of the rabid animals are also source of rabies virus. Dog bite is the main cause of the spread of the rabies virus to humans. Dog bite is a bite inflicted upon the humans or any other animal by the dog. Dog bite can cause physical injury which may require surgery, psychological trauma, post-traumatic stress or very fatal viral disease rabies. Some strains of dogs are more profound to attack than other strain and their attacking habit is reinforced by humans' negligence and mal-practicing with animal during training. Although majority of the people are attacked by stray dogs. Rabies is a preventable fatal disease but the death is inevitable once it occurs.

Dog bites are a public health problem across the world. Due to the issue of increase in the stray dog population there is rise in the cases of dog attacks and outbreak of rabies. Tens of billions of people are affected by rabies every year. In U.S 4.5 million people are bitten by the dos each year. Children and old age people are more susceptible to dog bite. More death has occurred due to dog bites than those occurred by lightning strikes. 6000 Austrians receive treatment for dog bite annually.[7] Identical cases of dog bite are reported in U.K., Belgium[9], Spain, and Switzerland. 24000 people die due bites in Africa every year. Most of the cases are not reported in developing countries and the number of such cases is conspicuous. 23000-25000 death occur in South-East Asia every year, which is 45 % of death that occur worldwide due to rabies.

However due to economical status, education and superstitial belief all cases of dog bite do not go to health centers and in this way majority of cases go unreported. Dog bite and rabies are mismanaged and are not reported. Study conducted in 2009 shows that 6212 cases of dog bite were reported with majority of cases reported from Karachi, Peshawar, and Hyderabad. Lack of resources, poor health system and weak reporting system, surveillance of dog bite and associated rabies infection has been a challenging task. Currently the supervision of dog bite and rabies is under control of Government health management information system reporting program but due to poor data collection has been a hurdle in managing event-based disease control.

Awareness and knowledge about dog bite in rural areas is not satisfactory. Incongruous superstitions and Myths are associated with dog bites. Certain practice regarding first aid management of dog bite prevails in community. Application of chilies, turmeric powder and oil paste is common practice in rural areas, on the other hand, the people in urban areas rush toward the heath care centers to seek medical help and a few washes their wound with soup and plenty of water as a primary home remedy. In the light of current scenario, it is necessary to conduct a study on Rabies and the frequency of the patient reaching health care center to seek treatment to improve general awareness among the common people regarding awareness among the common people regarding prevention and prompt management of dog bite and rabies. We have three goals in this article, to understand the pathogenesis of the disease rabies and be able to manage this problem most effectively, to be able to avoid preventable deadly complications of this disease and to give awareness about right treatment and remove wrong concepts among the public about this highly fatal disease.

MATERIAL AND METHODS:

The study design was descriptive cross-sectional**.** The study was conducted among the people visiting the rabies center. This study was completed in the duration of one month. All the people visiting the rabies center for vaccination. 60 respondents were included in sample size. The sample size was calculated with the confidence of 95% at acceptable difference of 0.08 with considering assumed proportion of 0.43. it was non-Probability convenient sampling technique. The participants on this study was Voluntary interview. And those patients were excluded whose were not willing for interviews. For the data collection the researcher develops the semi-structural interview questioning containing both close and open-ended questions. The researcher himself/herself visited the center. Respondents were interviewed after the verbal informed consent and the responses were noted down on the questionnaire. The complete questionnaire was entered into the computer for data analysis. A computer software statistical package for social science (SPSS) version 22.0 was used for data entry and analysis. Frequency and percentages were calculated were calculated for categorical variables and data was plotted into tables and graphs. Informed verbal consent was taken prior to interview. The respondents were informed about the purpose of study. The confidentiality of all the information was ensured and maintained.

RESULTS:

Table # 1: Frequency Distribution of Patient According to Age

Age of Respondents	Frequency	Percentage
> 10 years	14	23.3
10-17 years	22	36.7
18-26 years	14	23.3
27-34 years	4	6.7
35-42 years	4	6.7
43-51 years	1	1.7
<52 years	1	1.7
Total	60	100%

Table # 2: Frequency Distribution of Patient According to Knowledge of Time Period of Vaccine Administration

	Frequency	Percentage
Yes	22	36.7
No	38	63.3
Total	60	100%

Table # 3: Frequency Distribution of Patient According to Allergic Reaction to Vaccination

Age of Respondents	Frequency	Percentage
11 /07/18	27	45
12/07/18	1	1.7
14/07/18	5	8.3
15/07/18	1	1.7
16/07/18	1	1.7
16/07/18	3	5.0
16/07/18	1	1.7
17/07/18	1	1.7
17/07/18	1	1.7
18/07/18	2	3.3
18/07/18	1	1.7
19/07/18	1	1.7
20/07/18	2	3.3
20/07/18	10	16.7
22/07/18	1	1.7
23/07/18	1	1.7
24/07/18	1	1.7
Total	60	100%

Table # 4: Frequency Distribution of Patient According to Gender

	Frequency	Percentage
Male	45	75
Female	15	25
Total	60	100%

Table # 5: Frequency Distribution of Patient According to Education

	Frequency	Percentage
Illiterate	6	10.0
Primary	18	30.0
Middle	10	16.7
Matric	10	16.7
Graduation	16	26.7
Total	60	100%

Table # 6: Frequency Distribution of Patient According to Knowledge of Signs and Symptoms of Rabies

	Frequency	Percentage
Yes	24	40
No	36	60
Total	60	100%

Table # 7: Frequency Distribution of Patient According to Case Seen in Village

	Frequency	Percentage
Yes	36	60
No	24	40
Total	60	100%

Table # 8: Frequency Distribution of Patient According to Knowledge of Saliva, Blood and Abraded Skin Contact by Animal Cause Rabies

	Frequency	Percentage
Yes	42	70
No	18	30
Total	60	100%

Table # 9: Frequency Distribution of Patient According to Involved Animal Causing Disease

	Frequency	Percentage
Cat	3	5
Dog	56	93.3
Any other	1	1.7
Total	60	100%

Table # 10: Frequency Distribution of Patient According to Medical Care Center Availability Near House

	Frequency	Percentage
Yes	27	45
No	33	55
Total	60	100%

Table # 11: Frequency Distribution of Patient According to Knowledge of Fatality Rate

	Frequency	Percentage
Yes	43	71.7
No	17	28.3
Total	60	100%

Table # 12: Frequency Distribution of Patient According to Knowledge of Treatment Preference

	Frequency	Percentage
Go for injection from a general practitioner	28	46.7
Go to spiritual healer	4	6.7
Any other specified	1	1.7
Go to Hospital	25	41.7
Do nothing	2	3.3
Total	60	100%

Table #13: Frequency Distribution of Patient According to Treatment Information

	Frequency	Percentage
Injections	49	81.7
Medicines	5	8.3
Don't know	6	10.0
Total	60	100%

Table # 14: Frequency Distribution of Patient According to Knowledge of Survived Victims

	Frequency	Percentage
Yes	43	71.7
No	17	28.3
Total	60	100%

Table # 15: Frequency Distribution of Patient According to Information About Treatment of Rabies Vaccination

	Frequency	Percentage
Not much	41	68.3
Don't have any information	19	31.7
Total	60	100%

Table # 16: Frequency Distribution of Patient According to Knowledge of Animal Death After Bite

	Frequency	Percentage
Yes	18	30.0
No	42	70.0
Total	60	100%

Table # 17: Frequency Distribution of Patient According to Knowledge of Date of Vaccination

	Frequency	Percentage
Yes	8	13.3
No	52	86.7
Total	60	100%

Table # 18: Frequency Distribution of Patient According to Knowledge of Date of Vaccination

	Frequency	Percentage
Throwing in an open place	13	21.7
Burning and dumping	44	73.3
Burning in an open place	2	3.3
Only dumping	1	1.7
Total	60	100%

Table # 19: Frequency Distribution of Patient According to Knowledge of Previous Vaccination History

	Frequency	Percentage
Yes	44	73.3
No	16	26.7
Total	60	100%

Table # 20: Frequency Distribution of Patient According to Information About Rabies Treatment Other Than Vaccination

	Frequency	Percentage
Yes	13	21.7
No	47	78.3
Total	60	100%

DISCUSSION AND CONCLUSION:

Knowledge of dog bite and associated disease is average among the people visiting the rabies center for vaccination. Majority do know the importance of the medical assistance after the dog bite but their economical status makes it difficult for them to gain access to a good hospital or dog bite center. Only few clanged to the older methods of application of homemade paper bandage or seek help from a spiritual healer. Information concerning the rabies symptoms is poor which can lead to delay or negligence in accruing prompt medical treatment and may result in loss of life which could otherwise be saved. Most of the injuries occur on limbs. There is a good understanding of the cause and ways by which the virus can be transmitted, most of the people are aware that it can spread while handling an injured stray dog or prophylaxis in case of contact of saliva of a pet dog.

People are well aware regarding the presence of vaccine for rabies but lack of knowledge about prophylactic antibiotic treatment immediately after a dog bite may be linked with increased risk of secondary presentation related to infection.

RECOMMENDATIONS:

Keep in mind the result of the study conducted following recommendation are advised

i. People should be aware of signs and symptoms of disease caused by dog bite and treatment & management of the disease.
ii. People should know the severity of the disease caused by dog bite.
iii. They should know the first line treatment of dog bite i.e to clean the wound with soap and water.
iv. People should be motivated for vaccination.
v. There is need to improve services at the centers for management of the dog bite.
vi. Seminar should be conducted to improve knowledge of people about treatment and prevention of dog bite.
vii. Laws must be established to kill stray dogs and proper way of their disposal.
viii. If someone wants to approach a dog, do it slowly and give him the chances to approach first.
ix. Avoid approaching a dog that is feeling her puppies
x. If a dog becomes aggressive, don't, move slowly and don't make eye contact with him.
xi. Stay away from an unfamiliar dog.
xii. Never leave your children with a dog, especially an unfamiliar.
xiii. Health service department should bring projects for good health of people.
xiv. Social media and newspaper should provide the knowledge in this regard.
xv. There should be a proper survey in certain areas to know the present condition and provide information about dog bite that causes severe result if not treated.

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