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Community Medicine

TO ASSESS THE AWARENESS AMONG JUNIOR RESIDENTS REGARDING MANAGEMENT OF ANIMAL BITE IN NALANDA MEDICAL COLLEGE HOSPITAL, PATNA.

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ABSTRACT **BACKGROUND:** Animal bite in humans are a major public health problem. Rabies is a highly fatal disease. The knowledge regarding animal bite management among health professionals is of utmost importance for prevention of this deadly disease. **OBJECTIVE:** To assess the awareness about animal bite management in prevention of transmission of rabies in humans among Junior Residents. **METHODS:** A cross sectional study was done from January 2016 to March 2016 among 80 randomly selected Junior Residents from various departments of the Institute giving equal consideration to residents of clinical and Para clinical disciplines. A predefined, pretested questionnaire was used to collect data. Appropriate Statistical tests were used wherever applicable. **RESULT:** Residents of the clinical disciplines has better knowledge regarding burden of rabies 80.64%. Only 50% residents belonging to Para clinical disciplines had knowledge about correct categorization of animal bite .Only 50% Residents of Para clinical disciplines were aware of intradermal antirabies vaccine schedule. **CONCLUSION:** Special attention is needed in strengthening the fundamentals of management skills in Internship and through orientation program to Junior Residents.

KEYWORDS : Rabies , Awareness , Junior Residents.

INTRODUCTION

Human rabies continues to be endemic in India. Rabies in India has been a disease of low public health priority in the medical sector.[1] This is very unfortunate as almost 65,000 people across the globe and 20,000 people in India die of rabies every year, making it the country with the highest rabies fatalities in Asia and the second highest in the world.[2] Most of the deaths are due to ignorance and lack of access to affordable services. The owned dog population is estimated to be over 25 million in India.[3] It is estimated that the number of deaths due to rabies may be 10 times more than that reported.[4] The majority of the cases of rabies (about 97%) are due to bites from rabid dogs, followed by bites from other animals like the cat, cow, monkey, horse, pigs, and camels.[5] According to the WHO, proper post-exposure prophylaxis (PEP) can prevent human rabies completely.[6] Inadequate knowledge regarding the classification of animal bite wounds leading to improper vaccination continue to be seen in other parts of the world and India.[7] India spends about 15 billion rupees for rabies vaccines alone, exerting a sizeable economic burden on the government.[1] There are many myths and false beliefs associated with wound management. These include application of oils, herbs, and red chilies on the wounds inflicted by rabid animals, and not washing the wound properly. Junior residents are the main source of medical care for antirabies treatment to the victims of animal bites. The main objective of this study was to assess the knowledge among the junior residents in a tertiary care institute in Haryana regarding animal bite management.[8]

OBJECTIVE

To assess the awareness about animal bite management in prevention of transmission of rabies in humans among Junior Residents.

MATERIALAND METHODS

This study was a cross- sectional study conducted carried out among 80 Junior Residents in Nalanda Medical College, Patna, and Bihar.

Study Period: this study was conducted from January 2016 to March 2016

Study Tool: The study was conducted using the pretested semi-structured questionnaire among junior residents from various departments of the institute, among them 60 were from clinical and 60 were from paraclinical disciplines selected by simple random sampling. The first part of the questionnaire included demographic characteristics whereas the second part had questions regarding the knowledge of animal bite management.

Data Analysis: The Data were analysed by appropriate statistical tests using Epi-info software

RESULT

Among the 80 residents 60% were men and 40% were women .Residents of the clinical disciplines had better knowledge regarding problems of rabies (80.64%) compared to those of para-clinical disciplines (50%) and the difference was found to be statistically significant. Only 50% residents belonging to paraclinical disciplines had knowledge regarding correct categorization of animal bite wound as compared to 69.35% residents of the clinical disciplines. Importance of washing the wound with soap and water to prevent rabies was properly mentioned by 91.9% and 83.3% residents of clinical and paraclinical disciplines, respectively. Nearly one-third residents of paraclinical disciplines were not aware of the subsequent first aid measures to be taken for animal bite, and this difference was found to be statistically significant as shown in Table 1 .

Table 2 shows the awareness among residents regarding pre- and post-exposure prophylaxis . . Proper knowledge regarding different types of vaccines used in prevention of rabies was mentioned by 59.7%% and 38.9% clinical and para-clinical residents, respectively. Only 50% residents of para-clinical disciplines had knowledge about intradermal antirabies vaccine schedule.

Table 1 Knowledge Among Junior Residents Related To Epidemiological Determinants Of Rabies And First Aid Measures

Variables	Correct Knowledge		P-Value
	Residents of Clinical Patients (N=62)	Residents of Para-Clinical Patients (N=18)	
Burden of Disease	50(80.6%)	9(50.0%)	<0.05
Animals transmitting Rabies	57(91.9%)	15(83.3%)	0.532
Mode of Transmission	57(91.9%)	15(83.3%)	0.532
Categorisation of bite wound	43(69.4%)	9(50.0%)	0.129
Importance of wound washing	57(91.9%)	15(83.3%)	0.532
Incubation period of the disease	47(75.8%)	10(55.5%)	0.094
First aid awareness	55(88.7%)	12(66.7%)	0.026

Table 2 Knowledge among Junior Residents Regarding Pre and Post Exposure Prophylaxis Of Rabies

Variables	Correct Knowledge		P-Value
	Residents of Clinical Patients (N=62)	Residents of Para-Clinical Patients(N=18)	
Awareness about post-exposure prophylaxis-			
• Observation of the animal following bite	49(79.0%)	11(61.1%)	0.122
• Different types of vaccine used	37(59.7%)	7(38.9%)	0.014
• Site and route of post-exposure prophylaxis	48(77.4%)	11(61.1%)	0.166
• Schedule of IM route	47(75.8%)	10(55.5%)	0.094
• Schedule of id route	46(74.2%)	9(50.0%)	0.051
• Correct dose of vaccine to be administered	43(69.3%)	11(61.1%)	0.511
• Correct dose of immunoglobulin to be administered	45(72.5%)	9(50.0%)	0.071
Awareness about pre-exposure prophylaxis-			
• Groups to be given pre-exposure prophylaxis	47(75.8%)	13(72.2%)	0.757
• Schedule of pre-exposure prophylaxis	41(66.1%)	9(50.0%)	0.213
• Administration of booster injections	32(51.6%)	8(44.4%)	0.592

DISCUSSION

This study found that the residents of the clinical disciplines had better knowledge compared to the residents of para-clinical disciplines as they frequently come across such cases. In a study conducted by Garg et al.[9] in Delhi among the allopathic doctors, it was found that less than half were aware of the intradermal rabies prophylaxis schedule (39.1%), site (42.2%), and dose (48.4%). The majority (81.4%) were aware of the post-exposure schedule in unimmunized disciplines. However, only 40.4% knew the post-exposure schedule in previously immunized disciplines, and 47.8% knew pre-exposure prophylaxis schedule. Our study showed a better knowledge among the residents; the probable reason could be their involvement in active learning during the study period. A cross-sectional study conducted among general practitioners in Belgaum city by Nayak et al.[10] depicted majority of doctors (>95%) practiced cleaning of wound as a first aid measure. The antirabies vaccine was used by 95% MBBS doctors and knowledge regarding route of administration of vaccine was fairly good. Only 50% doctors knew the exact site of administration. Proper schedule of vaccination was practiced by only 69% doctors. These findings are coherent with this study. In a study by conducted by Bhalla et al.[11]in Jamnagar, most (95%) of MBBS doctors practiced cleaning of wound as first aid measure for animal bite. Their knowledge regarding categorization of animal bites in different classes was very poor. Nobody had knowledge about immunoglobulin or sera, and they were not using them for treating disciplines. Majority of the doctors were of the view that revaccination is not necessary in previously vaccinated patient within 3 months if he or she gets an animal bite. The findings of better knowledge about first aid and poor knowledge about the categorization of the wounds are similar with this study. A knowledge gap was found in this group of residents, and therefore, further studies are recommended to evaluate the knowledge and practices of junior residents.

CONCLUSION

There is an apparent lack of awareness among junior residents regarding appropriate animal wound management and vaccine administration. Animal bite cases are frequent at all levels of government and private healthcare delivery in India and a practically oriented teaching of wound management and pre and PEP is necessary at the undergraduate level. Interactive CMEs will also help to address specific knowledge deficiencies. Inadequate knowledge of healthcare personnel will on one hand endanger the life of the patients attending the centres for treatment and increase the healthcare budget of the government on unnecessary vaccines and immunoglobulins on the other. The Department of Community Medicine at the medical colleges should take the initiative to start these clinics to deal with this public health problem.

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