

Original Article

Awareness regarding Rabies and its prevention among first year Medical College students of Mandya Institute of Medical Sciences Mandya.

Vinay M*, Sheethal M P **, Mahendra B J ***

Introduction

Rabies is a viral zoonotic disease that is spread to humans through contact with infected saliva by bites, licks or scratches. The main route of rabies transmission to humans is the bite of rabid animals (mostly dogs). Most of the deaths occur in the absence of post exposure prophylaxis. An estimated 55,000 human rabies deaths occur annually in Asia and Africa¹. 20,000 humans die annually in India due to rabies².

Effective treatment soon after exposure to rabies can prevent death. Post exposure prophylaxis consists of local treatment of wound, administration of rabies immunoglobulin (if indicated) and vaccination.

The large number of deaths due to rabies can be attributed to the fact that in spite of availability of effective post exposure prophylaxis, people are not aware of the various aspects of the disease and its prevention³. The present study was undertaken to assess the knowledge regarding rabies among 1st year medical students.

Objectives

1. To assess the knowledge regarding rabies among first year medical students
2. To evaluate the knowledge of first year medical students regarding post exposure prophylaxis following an animal bite
3. To know the perception of the first year medical students regarding prevention of rabies in the community

Materials & Methods

This study was conducted at Mandya Institute of Medical Sciences. 98 first year MBBS students were enrolled, all of whom were approached with a pre-designed and pre-tested questionnaire regarding various aspects of rabies and its prevention. Data was collected from 91 students who consented to participate in the study. The data was analyzed using MS excel software and T test.

Results

91 of the 98 first year medical students of MIMS Mandya, participated in the study.

Of the 91, 85 (93.40%) knew that rabies is caused by virus, the rest were of the opinion that rabies was caused by a bacteria. 45 (49.45%) knew that 20,000 people die annually due to rabies in India, while 18 (19.78%) and 28 (30.76%) thought that the annual mortality in India was 30,000 and 10,000 respectively.

89 students (97.80%) knew that rabies is transmitted through the bites of an animal and only 6 (6.59%) and 4 (4.39%) knew that it could be transmitted by scratch and lick also. All the students interviewed knew that rabies is transmitted by dogs. 23 of the respondents (25.27%) knew that it is also transmitted by cats. 8 (8.79%) students felt that it is transmitted by monkeys and rodents, 5 (5.9%) thought that it is transmitted by cows, mongoose and bats. 3 (3.29%) students felt that it is transmitted by horse, pigs, wild animals and all mammals.

43 (47.25%) students knew that death is inevitable once a person gets rabies. 61 (67.03%) students knew that the symptom of rabies is hydrophobia and aerophobia, 18 (19.78%) students thought that person with rabies will behave like an animal, 14 (15.38%) felt that person with rabies becomes mad and 2 (2.19%) felt that person with rabies will appear asymptomatic.

Regarding the immediate measures that should be done to the bite wound, 63 (69.23%) felt that the bite wound should be washed, and of these 51 (56.04%) respondents felt that the wound should be washed with soap and water and 12 (13.18%) felt that it should be washed with water only. 52 students (57.14%) knew that an antiseptic has to be applied to the bite wound. 61 (67.03%) knew that the bite victim should consult doctor immediately. 17 (18.68%) felt that the bite wound should be bandaged and 15 (16.48%) students felt that a tourniquet should be applied above the wound. 3 (3.29%) students were of the opinion that irritant has to be applied and 3 (3.29%) knew that the wound should not be bandaged.

*Associate Professor, **Post Graduate student, *** Professor & Head
Dept of Community Medicine, Mandya Institute of Medical Sciences

23 (25.27%) students knew that 5 vaccine injections should be taken when bitten by an animal, 4 (4.39%) thought 10 injections should be taken and 50 (54.94%) felt that 14 injections is to be taken, 10 (10.98%) felt only 1 injection is enough. None of them were aware of the rabies immunoglobulin. 43 (47.25%) were aware that a person bitten by an animal should also receive tetanus injections if not vaccinated earlier.

With regard to their perceptions on the various measures that should be taken to prevent rabies from occurring in the community, 43 (47.25%) felt that animals should be vaccinated, 33 (36.26%) were of the opinion that various awareness activities to be undertaken regarding the prevention of occurrence of rabies, 21 (23.07%) felt that they should stay away from street dogs, and 29 (31.29%) felt that the number of stray dogs to be reduced of which 10 (10.98%) felt that the stray dogs should be killed. 8 (8.79%) thought that people in the community should be vaccinated before the exposure to the animal.

There was no significant statistical difference in knowledge regarding the causative agent of rabies between male and female students. Regarding the annual mortality in India due to rabies 23 (45.06%) of 51 boys

and 22 (55.00%) out of 40 girls had the correct knowledge regarding mortality due to rabies and again there was no significant statistical difference in knowledge between male and female students.

49 (96.07%) of 51 boys & all girls knew that rabies is transmitted by bites of an animal and 4 (7.84%) of 51 boys & 2 (05.00%) of 40 girls knew that that it could be transmitted by scratch and 2 (3.92%) of 51 boys & 2 (05.00%) of 40 girls knew that it is transmitted by animal lick also. The difference in knowledge between the sexes was not statistically significant.

All the respondents knew that rabies is transmitted by dogs. 16(31.37%) of 51 boys & 6(15.00%) of 40 girls knew that it is also transmitted by cats. 9(17.64%) of 51 boys & none of the girls knew that it is transmitted by monkeys. 7 (13.72%) of 51 boys & 2 (05.00%) of 40 girls felt that it can be transmitted by rodents also. The knowledge that a person can get rabies from monkey was significantly higher among males. 23(45.09%) of 51 boys and 20 (50.00%) out of 40 girls knew that rabies is an incurable disease. There was no significant statistical difference between knowledge of male and female students. 34 (66.66%) of 51 boys and 27 (67.50%) out of 40 girls knew that the symptom of rabies is hydrophobia and

Table 1
Sex wise distribution of knowledge regarding rabies and its prevention among first year medical students

| | Male (n=51) | Female (n=40) | Total (n=91) | |
|---|----------------------------|------------------|-----------------|-------------|
| Correct knowledge of the causative agent | 46 (90.19%) | 39 (97.50%) | 85 (93.41%) | |
| Knowledge of Annual Mortality in India | 23 (45.06%) | 22 (55.00%) | 45 (49.45%) | |
| Knowledge of Transmission | Bite | 49 (96.07%) | 40 (100.00%) | 89 (97.80%) |
| | Scratch | 4 (7.84%) | 2 (5.00%) | 6 (6.59%) |
| | Lick | 2 (3.92%) | 2 (5.00%) | 4 (4.39%) |
| Knowledge of Reservoir | Dog | 51 (100.00%) | 40 (100.00%) | 91 (100%) |
| | Cat | 16 (31.37%) | 6 (15.00%) | 23 (25.27%) |
| | Monkey | 9 (17.64%) | Nil | 8 (8.79%) |
| | Rodent | 7 (13.72%) | 2 (5.00%) | 9 (9.89%) |
| Knowledge of Case fatality | 23 (45.09%) | 20 (50.00%) | 43 (47.25%) | |
| Knowledge of Symptoms of rabies in man | 34 (66.66%) | 27 (67.50%) | 61 (67.03%) | |
| Knowledge of Post-exposure measures | Wash with soap & water | 28 (54.90%) | 23 (57.50%) | 51 (56.04%) |
| | Apply antiseptics | 30 (58.82%) | 22 (55.00%) | 52 (57.14%) |
| | Consult doctor immediately | 38 (74.50%) | 22 (55.00%) | 61 (67.03%) |
| Knowledge of Number of vaccine doses | 14 (27.45%) | 9 (22.50%) | 23 (25.27%) | |
| Knowledge of Preventing rabies in community | Awareness | 19 (37.25%) | 14 (35.00%) | 33 (36.26%) |
| | Reducing stray dogs | 8 (15.68%) | 11 (27.50%) | 19 (20.87%) |
| | Vaccinating dogs | 28 (54.90%) | 15 (37.50%) | 43 (47.25%) |

aerophobia. There was no statistical difference between knowledge of male and female students.

Regarding the immediate measures that should be done to the bite wound, 28 (54.90%) of 51 boys and 23 (57.50%) out of 40 girls felt that it should be washed with soap and water. 30 (58.82%) of 51 boys and 22 (55.00%) out of 40 girls felt that an antiseptic has to be applied and 38(74.50%) of 51 boys and 22 (55.00%) out of 40 girls felt that the bite victim should consult doctor immediately. The difference in knowledge between the sexes was not statistically significant. 14 (27.45%) of 51 boys and 9 (22.50%) out of 40 girls knew that 5 vaccine injections should be taken when bitten by dogs. There was no statistically significant difference between knowledge of male and female students.

With regard to their perceptions on the various measures that should be taken to prevent rabies from occurring in the community 19 (37.25%) of 51 boys and 14 (35.00%) out of 40 girls felt that various awareness activities to be undertaken regarding the prevention of occurrence of rabies, 8 (15.68%) of 51 boys and 11 (27.50%) out of 40 girls felt that the number of stray dogs

to be reduced and 28 (54.90%) of 51 boys and 15 (37.50%) out of 40 girls felt that the dog should be vaccinated.

Conclusion

Majority of the first MBBS students knew that rabies is caused by virus which is transmitted through dog bite. About half of the students knew about the symptoms and post exposure measures correctly. They had poor knowledge about the other modes of transmission, animals that can transmit rabies, rabies immunoglobulin and the number of vaccine doses. The knowledge regarding rabies and its prevention among male and female students was not dissimilar.

References

1. <http://www.who.int/rabies/en/> accessed on 27 Jan 2012 at 14:00 hours
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Announcement

The APCRI Newsletter is published every six monthly, in October and in April. APCRI members and the members of the Scientific Community are requested to contribute News Clippings, Photographs and Reports on Scientific activity on Rabies and Related matter for publication in the Newsletter.

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Please Contact:

Dr. Amlan Goswami,

Editor, APCRI,

28-A, Gariahat Road, 2nd Floor, Flat No: 2-A,

Kolkata- 700029, INDIA.

Phone: 91- 33-24405826, Mobile : 91- 9830212694.

E-Mail: amlan_kolkata29@rediffmail.com