

**Title:** KNOWLEDGE OF ANIMAL BITE AND ITS MANAGEMENT BY AYUSH DOCTORS

**Author:** Dr. Aurobindo Samantaray<sup>1</sup>, Dr. Manasee Panda<sup>2</sup>, Dr. Tapas Ranjan Behera<sup>3</sup>, Dr. Radha Madhab Tripathy<sup>4</sup>

1. Post graduate Student.
2. Associate Professor.
3. Assistant Professor.
4. Professor and Head.

Department of Community Medicine, MKCG Medical College, Berhampur, Odisha

**Keywords** Knowledge, AYUSH doctors, Animal bite

**Abstract** Rabies is a fatal disease but preventable by proper management of wound. Most animal bite cases are found in rural areas. Most of the time, victims of animal bite do not get proper treatment because of lack of awareness and their poor health seeking behavior. AYUSH doctors constitute an important source of first level of contact for health care in our country.

## Original Article

## Knowledge of Animal Bite and its Management by Ayush Doctors

Dr. Aurobindo Samantaray\*, Dr. Manasee Panda\*\*, Dr. Tapas Ranjan Behera\*\*\*, Dr. Radha Madhab Tripathy\*\*\*\*

---

### ABSTRACT

<b>Background :</b>	Rabies is a fatal disease but preventable by proper management of wound. Most animal bite cases are found in rural areas. Most of the time, victims of animal bite don't get proper treatment because of lack of awareness and their poor health seeking behaviour. AYUSH doctors constitute an important source of first level of contact for health care in our country. In this context the present study was carried out with the following objectives.
<b>Objectives :</b>	<ol style="list-style-type: none"> <li>1. To assess the knowledge of AYUSH doctors regarding animal bite and its management.</li> <li>2. To study the practices of the AYUSH Doctors for animal bite.</li> <li>3. To impart an educational session on proper guidelines for animal bite management.</li> </ol>
<b>Materials and methods:</b>	This study was a cross sectional study conducted in Dept. of Community Medicine, MKCG Medical College, Berhampur, from March 2013 to May 2013. A total of 87 AYUSH doctors from 5 districts of southern Odisha were interviewed about the management of animal bite and Rabies prevention. Data was collected in a scientifically designed and pretested questioner and analysed by SPSS ver-20 in Department of Community Medicine.
<b>Result :</b>	Out of 87 AYUSH doctors, 68 (78.2%) had primarily managed cases of animal bite. Among them 43 (62.3%) referred the cases for ARV treatment elsewhere but rest of them treated the cases. Only 14 (16.3%) AYUSH doctors had correct knowledge about first aid treatment after animal bite. 73 (86.9%) doctors opined that Tetanus Toxoid should be administered. 74 (88.1%) have correct knowledge about route of transmission of Rabies. Approximately half of AYUSH doctors correctly knew the specific management of animal bite. Similarly only 11 (18.6%) correctly knew the pre exposure prophylaxis schedule of Rabies.
<b>Conclusion :</b>	In the present study only half of the doctors had correct knowledge about specific management of animal bite and only 19% knew about pre exposure prophylaxis schedule, hence by sensitising AYUSH doctors regarding proper management of animal bite cases, rabies deaths can be minimised.
<b>Key Words:</b>	Knowledge, AYUSH Doctors, Animal bite

---

### INTRODUCTION

Rabies is a 100 % fatal disease but can be prevented by timely and adequate management of animal bite. In India 20,000 of an estimated global annual 55,000 rabies deaths occur, three-quarters of them in rural areas<sup>1</sup>. Most of the time, victims of animal bite in rural areas don't get proper treatment because of lack of awareness about dangers of animal bite and their poor health seeking behaviour. The simultaneous use of immunoglobulin and anti rabies vaccine in Category III exposure and anti rabies vaccine in category II exposure are the cornerstone of Anti Rabies Treatment. AYUSH doctors constitute an important source of first level of contact for health care in our country. Inadequate knowledge on animal bite management among AYUSH Doctors could be detrimental. In this context the present study was carried out with the following objectives.

### OBJECTIVES

1. To assess the knowledge of AYUSH doctors regarding animal bite and its management.
2. To study the practices of the AYUSH Doctors for animal bite.
3. To impart an educational session on proper guidelines for animal bite management.

### MATERIALS AND METHODS

Study design – Cross sectional study

Place of study - Dept. of Community Medicine, MKCG Medical College, Berhampur

Study period - March 2013 to May 2013

Participants - 87 AYUSH doctors from 5 districts of southern Odisha who attended the orientation training at MKCG Medical College, Berhampur in three batches.

---

\*Post Graduate Student, \*\*Associate Professor, \*\*\*Assistant Professor, \*\*\*\*Professor & Head  
Department of Community Medicine,  
M.K.C.G. Medical College, Berhampur, Ganjam (Odisha)

Study instrument - Scientifically designed and pretested questionnaire used. The questionnaire was about the socio-demographic information of AYUSH Doctors, their Knowledge on Rabies and Management of animal bite cases.

Purpose of the study was explained to the participants and written consent was taken from them.

Statistical analysis - Collected data was analysed by SPSS ver - 20 in Department of Community Medicine.

**RESULTS AND DISCUSSION**

Out of 87 AYUSH Doctors, 63(72.4%) were Ayurvedic (B.A.M.S) doctors and rest 24(27.6%) were Homeopathic (B.H.M.S.) doctors. 77(88.5%) doctors were male and 10(11.5%) were female. Majority of them i.e. 48(55.2%) were more than 50 years old, 21(24.1%) were between age group 40-50 years and 18(20.7%) were less than 40 years of age. Age range varies from 30 to 57 years. Majority 49(56.3%) were having professional experience of more than 20 years, 16(18.4%) had experience between 10 to 20 years and rest had less than 10 years of experience (Table I). A similar study was conducted by Sangeeta Das et al with 55 AYUSH Doctors, of them 29(52.7%) were Ayurvedic doctors and 26(47.3%) were Homeopathic doctors of Ganjam district of Odisha<sup>2</sup>.

**Table I**  
Socio-Demographic information of AYUSH Doctors (n = 87)

Age wise distribution	30-40 yrs	40-50 yrs	>50 yrs
	18(20.7%)	21(24.1%)	48(55.2%)
Sex wise distribution	Male	Female	
	77(88.5%)	10(11.5%)	
Qualification	B.A.M.S.	B.H.M.S.	
	63(72.4%)	24(27.6%)	
Service Experience	<10 yrs	10-20 yrs	>20 yrs
	22(25.3%)	16(18.4%)	49(56.3%)

During their professional experience, 49 (77.8%) B.A.M.S. and 19 (79.2%) B.H.M.S doctors had handled animal bite cases but only 29 (46.0%) B.A.M.S. and 9 (37.5%) B.H.M.S. doctors had knowledge about WHO classification of animal bite. In a study conducted by Subhas

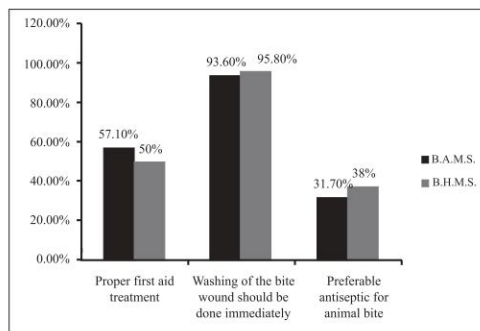
Babu P et al 67.3% of the Medical Officers knew the correct WHO classification of animal bites<sup>3</sup>.

59(67.8%) doctors responded positively to the fact that animal bite and animal scratch are equally dangerous. Similarly 82.5% of B.A.M.S. and 91.6% of B.H.M.S. doctors had correct knowledge about transmission of Rabies. But only 36.5% of B.A.M.S. and 50% of B.H.M.S. doctors knew that Rabies can only be prevented but it can't be treated. There was no significant difference between the qualification of the doctors (B.A.M.S. / B.H.M.S.) and the knowledge about transmission of Rabies (Table II).

**Table II**  
Knowledge about aetiology of animal bite

	B.A.M.S. (n = 63)		B.H.M.S. (n = 24)	
	Positive response	Negative response	Positive response	Negative response
Animal bite, animal scratch are equally dangerous	39(61.9%)	24(28.1%)	20(83.3%)	4(16.7%)
Rabies is transmitted mainly by animal bite	52(82.5%)	11(17.5%)	22(91.6%)	2(8.4%)
Rabies can be prevented, it is not curable	23(36.5%)	40(63.5%)	12(50%)	12(50%)

About the first aid treatment of animal bite cases 48(55.2%) had correct knowledge. Of them 93.6% of B.A.M.S. and 95.8% of B.H.M.S. doctors opined that bite wound should be washed immediately with or without soap. But only 29(33.3%) answered that a virucidal agent like providone iodine is preferable antiseptic (Fig I). In their study Sangeeta Das et al had described that 98% of AYUSH doctors advised their patients to properly wash the bite wound with soap and water but only 5.4% advised for topical virucidal



**Fig I** - Knowledge about First aid treatment of animal bite

application<sup>2</sup>. The findings of a study by Vyas Sheetal et al revealed that only by 17 (7.9%) of animal bite cases washed their wound with soap and plenty of water<sup>4</sup>.

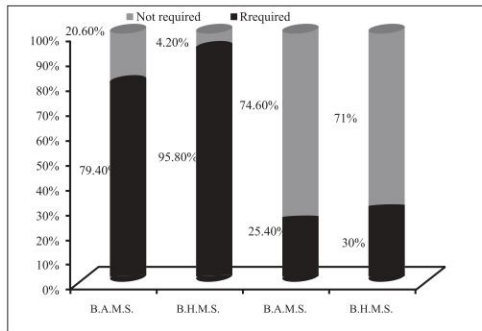


Fig II - Knowledge about need of tetanus toxoid and suturing for animal bite

73(83.9%) AYUSH doctors recommended using tetanus toxoid in animal bite cases. Similarly 47(74.6%) of B.A.M.S. and 17(70.8%) of B.H.M.S. doctors suggested that bite wound shouldn't be sutured immediately (Fig II).

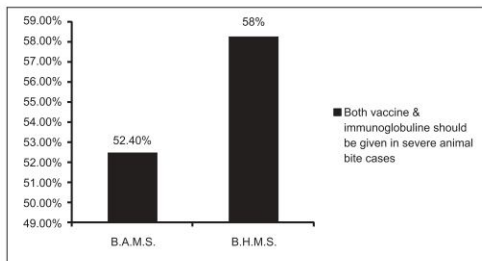


Fig III - Knowledge about administration of both vaccine & immunoglobulin in category III animal bite cases

Both Immunoglobulin and Vaccine are the mainstay approach for severe (Category III) animal bite management but only 52.4% of B.A.M.S. and 58.3% of B.H.M.S. doctors had correct knowledge about this. There was no significant difference between the qualification and specific management of animal bite cases (Fig III). In a study by S.R.Haldar et al only 29% respondents had the knowledge that both RIG and ARV has to be given after animal bite<sup>5</sup>.

Knowledge of AYUSH doctors regarding the availability of different brands of Tissue Cultured

Vaccine (TCV) in market was also assessed. Majority (71%) knew about availability of Rabipur in the market, 49% knew about Abhayarab, 30% about Verorab and 26% knew about Indirab. However only about 21% and 11% of AYUSH doctors knew about availability of Vaxirab and Rabivax respectively in the market (Fig IV). Sangeeta Das et al in their study had described that 60% of the AYUSH doctors were aware of Rabipur, 29% about Abhayarab, 27.2% about Verorab, 16.3% about Rabivax and 5.4% about Vaxirab<sup>2</sup>.

Knowledge about dosage and schedule of ARV and Immunoglobulin which are the mainstays of management of animal bite cases was assessed. In this study 64.4% of AYUSH doctors (82.4% among

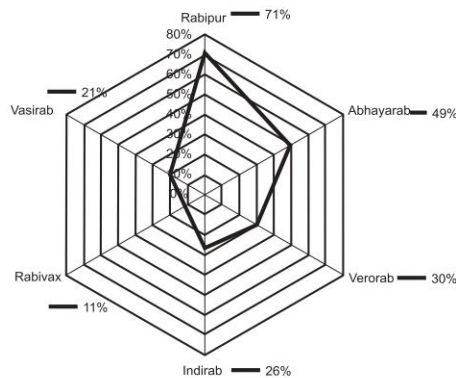


Fig IV - Knowledge about ARV availability in market

Table III  
Knowledge about vaccine and immunoglobulin administration

	Positive response			Negative response	No Response	Total
	B.A.M.S.	B.H.M.S.	Sub Total			
ARV given in category II & III animal bite	42	14	56 (64.4%)	12 (13.8%)	19 (21.8%)	87 (100%)
Immunoglobulin is required in category III animal bite	15	5	20 (23.0%)	44 (50.6%)	23 (26.4%)	87 (100%)
Correct schedule of ARV administration	20	13	33 (37.9%)	41 (47.1%)	13 (15.0%)	87 (100%)
Appropriate site of immunoglobulin administration	13	7	20 (23.0%)	48 (55.2%)	19 (21.8%)	87 (100%)
Correct schedule of Pre exposure prophylaxis	9	2	11 (12.6%)	48 (55.2%)	28 (32.2%)	87 (100%)

responders) knew that ARV should be given in category II & III animal bite cases but only 23.0% (31.2% of responders) knew that Immunoglobulin was required in category III. Correct schedule of ARV administration was known to only 37.9% of AYUSH doctors (44.9% among responders). In a study by R. K. Nayak et al, correct schedule of vaccination was practiced by only 69% of MBBS doctors and 22% of other doctors<sup>6</sup>.

Appropriate site of Immunoglobulin administration was known to only 20(23.0%) AYUSH doctors (29.4% among responders) and of them 13 were B.A.M.S. doctors and 7 were B.H.M.S. doctors.

Though 67.8% AYUSH doctors had knowledge about Pre Exposure Prophylaxis but only 12.6% (18.6% among responders) knew the correct schedule for Pre Exposure Prophylaxis (Table III).

AYUSH Doctors also mentioned about the management of animal bite according to their respective system. 21(33.3%) B.A.M.S. doctors advised different medications either orally or local applications like turmeric powder, Calotropis juice, karela swarsa, nimba, patal garud etc. Similarly 9(37.5%) B.H.M.S. doctors advised Hydrophobinum, Hypericum, Lysin, Cedrum etc for animal bite management. But in WHO TRS 931 nothing has been mentioned about the traditional management practice by Ayurvedic or Homeopathic doctors<sup>7</sup>.

## CONCLUSION

In the present study only half of the doctors had correct knowledge about specific management of animal bite, 44.6% knew correct schedule of ARV administration, 29.4% knew use of Immunoglobulin administration and only 18.6% had knowledge about pre exposure prophylaxis schedule. Hence by sensitising AYUSH doctors regarding proper management of animal bite cases, rabies deaths can be minimised for which there should be Continued Medical Educations on Rabies and its management among AYUSH doctors at regular intervals.

## REFERENCES

1. Bulletin of World Health Organization, "India's ongoing war against rabies" ([www.who.int/bulletin/volumes/87/12/09-021209/en/](http://www.who.int/bulletin/volumes/87/12/09-021209/en/))
2. Sangeeta Das, D M Satapathy, D Shobha Malini, Dhaneswari Jena, R M Tripathy. "Perception of AYUSH Doctors on Rabies Prevention", APCRI Journal, July 2012, Volume XIV, Issue I: 37-39
3. Subhas Babu P, Manjunath M, Mahendra B J, Harish B R, Vinay M, Nagaraja Goud B, AnilKumar K. "Awareness of Rabies Prevention and Intradermal Rabies Vaccination (IDRV): A study among Medical Officers of Mandya District, Karnataka" APCRI Journal, July 2012, Volume XIV, Issue I: 42-44
4. Vyas Sheetal, Gupta Kinnari, Bhatt Gneyaa, Tiwari Hemant. "Animal bite management practices: study at three municipal Corporation hospitals of ahmedabad" National Journal of Community Medicine 2010, Vol. 1, Issue 2:75-78
5. SR Haldar, D M Satapathy, D Jena, R M Tripathy. "Perception of paramedical students on Rabies and its prevention." APCRI Journal, January 2012, Volume XIII, Issue II: 25-26
6. R K Nayak, P R Walvekar and M D Mallapur. "Knowledge, Attitudes and Practices regarding Rabies among general practitioners of Belgaum City" Al Ameen J Med Sci 2013; 6(3):237-242
7. World Health Organization. Expert consultation on Rabies. WHO Technical Report Series 931

## 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.**

**Please contact the Convener of the Editorial Board of APCRI.**

**Please Contact:**

**Dr. Amlan Goswami,  
Editor, APCRI**

**28-A, Gariahat Road, 2<sup>nd</sup> Floor, Flat No: 2-A,  
Kolkata- 700029, INDIA.**

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

**E-Mail: [amlan\\_kolkata29@rediffmail.com](mailto:amlan_kolkata29@rediffmail.com)**