IJAM

ORIGINAL RESEARCH PAPER ISSN (O) : 2663 - 046X | ISSN (P) : 2663 - 0451

TREATMENT AND SOCIO-DEMOGRAPHIC PROFILE OF OUTDOOR PATIENTS ATTENDING ANTI-RABIES VACCINATION CLINIC IN AURANGABAD CITY

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ABSTRACT

Background: The present study explores the treatment and socio-demographic profile of animal bite patients in Aurangabad city. for the planning and implementation of an efficient prevention and control programme it is of utmost importance to understand the epidemiology of animal bite

Objectives: To assess the treatment pattern and socio-demographic profile of animal bite patients.

Methods: This cross-sectional study was carried out ion100 patients attending anti-rabies vaccination OPD of Government Medical College, Aurangabad from January 2016 to May 2016. Detailed socio-demographic profile, type of bites including duration, category of exposure, site, wound toilet, treatment, etc was inquired.

Results: Overall, 66% were males and 34% were females. In the rural area, most of the people were bitten by a stray dog (42%) followed by wild animals like pigs, and monkeys (16%) as compared with 38% of stray dog bite cases in urban areas. The lower limb was the commonest site of animal bite followed by the upper limb, trunk, and head in both areas. Maximum cases belonged to category III (84%) in rural areas followed by category I (10%). Most of the rural patients (46%) preferred home remedies of treatment i.e. application of oil, salt, red chilies, and turmeric paste applications as compared with 10% of urban patients.

Conclusion: Present study revealed that the majority of the patients from rural areas were inflicted upon by stray dogs (54%) and relied more upon home remedies thereby reporting late to government hospitals.

KEY WORDS : Socio-demographic profile, animal bite, anti-rabies vaccine, wound toile

Introduction:

Many Mammals that live closely and interact with a man can inflict injury to them through bites and can cause highly fatal rabies infection.[1] Rabies is a major public health problem in developing countries like India. In India rabies kills an estimated 20000 people annually. Despite advances in medical sciences, human rabies remains practically a cent percent fatal disease.[2] As per some estimates annually about 20,000 people die of rabies and 17 million animal/dog bites occur in India. These figures are alarming and immediate action is required to stop this scourge.[3-5] This high mortality due to rabies is because of a lack of awareness among people about the management of animal bites which prevents them from obtaining immediate medical care including post-exposure prophylaxis (PEP).[6]

Moreover, there are many myths, superstitions, and false beliefs prevalent regarding wound care among laymen. These include home remedies like the application of oils, salt, lime, herbs, red chilies, and turmeric paste on the wound inflicted by animal bites. It is noteworthy that people have more faith in traditional and indigenous medicines which have unproven efficacy.[7] With this background, the present study has been undertaken To assess the socio-demographic profile and treatment pattern of animal bite patients to understand the epidemiology of animal bites for the planning and implementation of an efficient prevention and control programme at the local, state, and National level.

Methods:

It was a hospital-based cross-sectional study. The study was carried out in anti-rabies vaccination OPD of Government Medical College, Aurangabad. The study was conducted from January 2016 to May 2016. Study subjects were 100 animal bite patients drawn by random selection attending an anti-rabies vaccination clinic. After obtaining written informed consent from the patients, all 100 adult patients were interviewed with the aid of a preformed structured questionnaire.

With the aid of a preformed structured questionnaire, all patients were subjected to socio-demographic profiles. Also, detailed history of animal bites wound toileting, and treatment including both active and passive immunization was enquired. History regarding health-seeking behavior of animal bite patients like application of red chilies, turmeric oils, salt, lime, and herb paste on the wound was inquired. Statistical analysis was done by proportions and percentages.

Results:

Table 1 shows the socio-demographic picture of all 100 study participants. The number of patients studied was 100.Maximum(51 %) patients were in the age group of 20-40 years, followed by 30% were between 40-60 years of age, 11% were above 60 years and the least number i.e. 8 % were aged less than 20 years. Out of total patients, 70% were male and 30% were female. It was observed that the majority of patients i.e. 90% were from urban areas and only 10% were from rural areas. Majority i.e. 36% were educated up to high school, 27% patients were graduate or post graduate, 14% completed only primary education, 10% were educated up to middle school whereas 13% were uneducated. Out of 100 patients 9% were professional workers, 13% were skilled workers, 12% were semi-skilled and 30% were unskilled workers. Whereas 37% were unemployed including students. As per socio-economic status, 40% belonged to the lower middle class, 15% to the upper-middle class, 9% to the upper class, 15% to the lower class and 21% to the upper

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lower class. Out of a total 100, 26% of patients gave a history of some or other addiction and 74% had no addictions.

Table 2 shows the distribution of patients according to the characteristics of wound. According to types of injuries 62% were of abrasion type and 28% were deep wounds and only 8% were licking type of wound with 70% being unprovoked and 30% were provoked. According to site of bite, the commonest site was found to be lower limb in 65%, upper limb in 30%, trunk in 3%, and head in only 2% of cases of animal bites .When patients were categorized as per WHO classification of animal bite, it was seen that 62% animal bites were of category III exposure; 22% belonged to category II animal exposure and 16% belonged to category I exposure.

Table 3 shows that; wound toileting was done by 80% of patients; whereas 20% of the patients had not done any wound toileting. 21% of patients had given a history of local application of turmeric. Whereas 15% had applied salt and oil over the wound. 25% had given a history of the application of soap and water and only 12% had applied antiseptic on the wound. 20% did not apply anything over the wound.

Table 4 shows the distribution of patients according to the treatment received and type of biting animal respectively. Out of total patients, active immunization (Anti rabies vaccine) was administered to 66% of patients whereas passive immunization (Immunoglobulin - equirab) was given to 26% of patients, & 98% were given injTT.

Out of total patients, 80% were dog bites, 8% were pig bites and 8% were monkey bites and only 4% cat bites.

Discussion:

According to our study maximum number of animal bite cases, 70% were males. Males are the main earners in most of the family, and they are outside their homes for relatively longer periods as compared to women and so have a higher risk of exposure to dogs and other animals. Similar findings were observed by Meshram HM et al[8] who shows that 78% of study subjects were male & Indu D et al[9] who showed that 57.7% of study subjects were males. Behera et al[10] also reported that the majority (69.9%) of patients were males.

According to our study, the most common site of the animal bite was found to be the lower limb in 65%, the upper limb in 30%, the trunk in 3%, and the head in only 2% of cases of animal bites (Table 2). Similar findings were observed by Meshram HM et al[8] who observed that most common site of injury was the lower limb(68%), upper limb(27%) followed by the head(3%) and by trunk(2%) and by Indu D et al[9] who observed that the most common site of injury was on the legs (50.1%) and hands (36.2%) and Gadekar RD et al[11] who observed that 79.2% cases had bite over lower limbs followed by upper limbs (14%), head, neck, face (3.1%), trunk (1.3%).

In our study, 16%, 22%, and 62% of the bitten patients had WHO category I, II, and III exposures respectively. Similar findings were observed by Meshram HM et al[8] who reported that 4% category I,!6% category II & 80% category III and Indu D et al[9] , who reported 5.4% category I, 37.5% category II, and 57.1% category III exposure. Also, Chauhan P et al[12] found that category III bites were more common (70.08%) than category II bites (29.61%). Khokhar et al[13] also got similar findings.

Most of the cases were aware of the importance of wound toileting. Washing of wound with soap and water immediately after the animal bite will help to remove the saliva of the animal as well as any soil particle from the wound and it will reduce the chance of development of rabies as well as tetanus.[14] About 80% had done wound toileting whereas 20% had not. Similarly, Meshram HM et al[8] reported that 78% had performed wound cleansing on bite injury and 22 did not. Also, similar findings were reported by Indu d et al[9] in which 92.7% had performed wound cleansing on bite injury sites and 7.3% did not.

In our study, most of the patients (80%) were inflicted by dogs followed by monkeys (8%), pigs (8%), and cats(4%). Similarly, Indu D et al[9] observed that majority of cases were bitten by dogs followed by cats. Renu Bedi et al[15] also found that dog bites contributed to 90.7% of all animal bites. Chauhan P et al[12] observed dog bites in 94% of cases followed by cat bites in 1.86%. Behera et al[10] observed similar findings.

Conclusions:

Health education of the community about immediate reporting of animal bites, the importance of proper wound care, and the necessity of taking anti-rabies vaccination should be done.

Conflict of Interest Declaration:

The authors declare that there is no conflict of interest.

Table 1: Socio-demographic characteristics of study subjects

n= 100		
Character	No. of Patients	Percentage
Age		
Below 20 years	8	8
Between 20 and 40 years	51	51
Between 40 and 60 years	30	30
Above 60 years	11	11
Gender		
Male	70	70
Female	30	30
Education		
Uneducated	13	13
Primary	14	14
Middle school	10	10
High school	36	36
Graduate, postgraduate	27	27
Residential area		
Urban	90	90
Rural	10	10
Addiction		
Yes	26	26
No	74	74
Occupation		
Profession	9	9
Skilled	12	12
Semi-skilled	12	12
Unskilled	30	30
Unemployed	37	37
SES		
Upper (I)	9	9
Upper middle (II)	15	15
Lower middle (III)	40	40
Upper lower (IV)	21	21
Lower (V)	15	15

Table 2: Distribution of patients according to the characteristics of wound

n= 100		
Character	No. of patients	Percentage
Type of wound		
Licking	8	8
Abrasion	62	62
Deep	28	28
Contusion / scratch	2	2
Type of bite		
Provoked	30	30
Unprovoked	70	70

Site of bite		
Head	2	2
Trunk	3	3
Upper limb	30	30
Lower limb	65	65
Category of exposure		
Category I	16	16
Category II	22	22
Category III	62	62

Table 3: Distribution of study subjects according to wound care

n= 100		
Character	No. of patients	Percentage
Toileting		
Done	80	80
Not done	20	20
Type of applicant		
Salt n oil	15	15
Turmeric	21	21
Soap n water	25	25
Antiseptic	12	12
None	20	20

Table 4: Distribution of study subjects according to treatment given & type of animal bite

n= 100		
Treatment given	No. of patients	Percentage
Inj TT		
Yes	98	98
No	2	2
ARV		
Yes	66	66
No	34	34
Immunoglobulin		
Yes	26	26
No	74	74
Type of Animal Bite		
Dog	80	80
Cat	04	04
Pig	08	08
Monkey	08	08
Others	-	-

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