



## A SURVEY ON DOG BITE AND USED TREATMENT METHODS: ETHNO-MEDICINE AND ALLOPATHIC MEDICINE AT FAR-WEST PART OF NEPAL

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### ABSTRACT

Dog bite is zoonosis disease which varies on age, sex and seasons. The objective of this survey was to document the status of dog bite and use of ethnomedicine and allopathic medicine for its treatment. An open end questionnaire was performed for data collection. The sample size of this survey was 633 families out of 1087 families. The results showed that 120 families suffered from dog bite having 168 patients. Men (58.33%) were more prone to have dog bite than women (41.67%). Incidence of dog bite was mostly observed in age group (0-25) years as compared to (26-50) years and above 50 years. Individual exposed to dog bite usually, once (91.07%) but also twice (6.55%) and more times (2.38%). Ethnomedicine (58.33%) was mostly used rather than allopathic (29.17%) and both medicine (12.5%). Thus, most of

individual depend upon ethnomedicinal plants for dog bite treatment. So people should also be aware about allopathic medicine and behaviour of dog.

**KEYWORDS:** Allopathic medicine; Dog bite; Ethnomedicine; Zoonosis.

### 1. INTRODUCTION

Dog bite is common injury globally in all age group of human, which is major cause of rabies.<sup>[1-3]</sup> Rabies is zoonotic, vaccine preventable viral injury, transmitted through scratches, bites and usually saliva of dog.<sup>[3]</sup> It varies among age (especially, children) and season (usually, spring and summer).<sup>[4]</sup> High exposed areas of dog bite are leg, hand, neck, face and others.<sup>[5]</sup> About 99 % of dog bite is from domestic dog.<sup>[3]</sup> Prevalence rate of dog bite is

particularly higher in developing countries at poor and vulnerable population.<sup>[3,6]</sup> WHO, Food and Agriculture Organization (FAO), International Organization for Animal Health (OIE) and Global Alliance for Rabies Control (GRAC) agreed to achieve ‘Zero Human Rabies Death by 2030’ with focusing on dog vaccination, improvement of post exposure prevention and dog bite preventive education.<sup>[3,7]</sup>

Medicinal plants have been used as primary health care since decade for the purpose on treatment of ailments. But, people from developing countries mainly depend upon ethnomedicinal plants.<sup>[8]</sup>

## **2. METHODS**

An open ended questionnaire was performed for data collection. Ethical clearance was obtained from either patients or guardians.

### **2.1. Objective**

The objective of this survey was cross-sectional study in status of dog bite and treatments methods either ethno-medicine or allopathic-medicine.

### **2.2. Sample Size and Study Area**

It was carried out in 633 families out of 1087 families from January 05, 2016 to February 02, 2016 at Godawari-05, Kailali, Nepal.

### **2.3 Inclusion Criteria**

Family guardian or patients, present during data collection and those who were ready to participate.

### **2.4. Exclusion Criteria**

Family guardian or patients, absent during data collection and those who hesitated to participate.

### **2.5. Data Analysis**

All data were collected and analyzed through Microsoft excel and expressed as number and percentage.

### 3. RESULT AND DISCUSSION

Among 633 families, 120 families suffered from dog bite (Table. 1). Total patients bitten from dog in 120 families were 168. Among them, prevalence rate was found to be higher in men rather than women (Table. 2). It might be due to difference in their attire and working station. Most of women wear gunyo cholo, surwal hill etc. as attire, covers body from top to bottom which might protect them from dog bite. While men wear usually half pant, t-shirt etc and have high risk of dog bite. Moreover, most of men are outdoor worker but women as housewife. Ultimately, men could be in high risk for dog bite as compared to women. According to WHO, men are in high risk of dog bite rather than women in some countries.<sup>[3]</sup> High incidence of dog bite was found at (0-25) year and lower at (26-50) year and above 50 year respectively in both genders (Table. 2). Children are more curious and often familiar with dog.<sup>[1]</sup> Leg was found to be highest bitten site in patients but face as lowest bitten site (Figure. 1). Our data showed that most of patients were once bitten from dog but also as twice and more time (Figure. 2).

**Table 1: Prevalence rate of dog bite in family.**

Family	Number	Percentage (%)
<b>Bitten</b>	120	18.96
<b>Unbitten</b>	513	81.04
<b>Total</b>	<b>633</b>	

**Table 2: Prevalence rate of dog bite based on age group.**

Total number of patients in 120 family= 168				
Age Group (years)	Woman		Man	
	Number	(Percentage)%	Number	(Percentage)%
<b>0-25</b>	44	62.86	69	70.41
<b>26-50</b>	21	30	25	25.51
<b>&gt; 50</b>	5	7.14	4	4.08
<b>Total</b>	<b>70</b>		<b>98</b>	

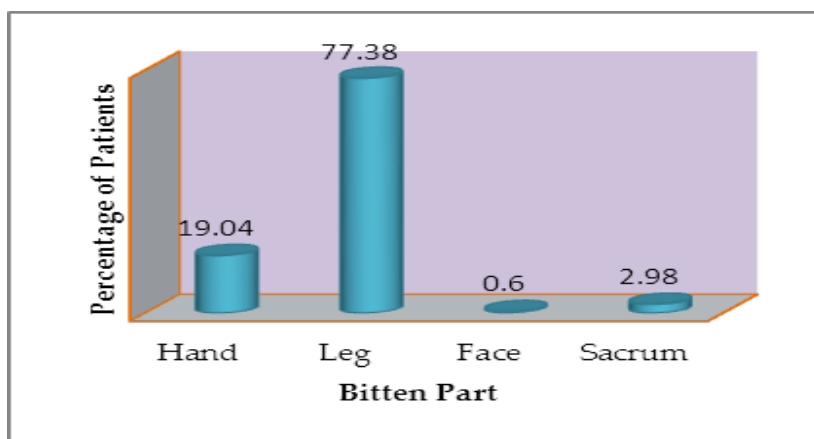


Figure 1: Body part bitten by dog.

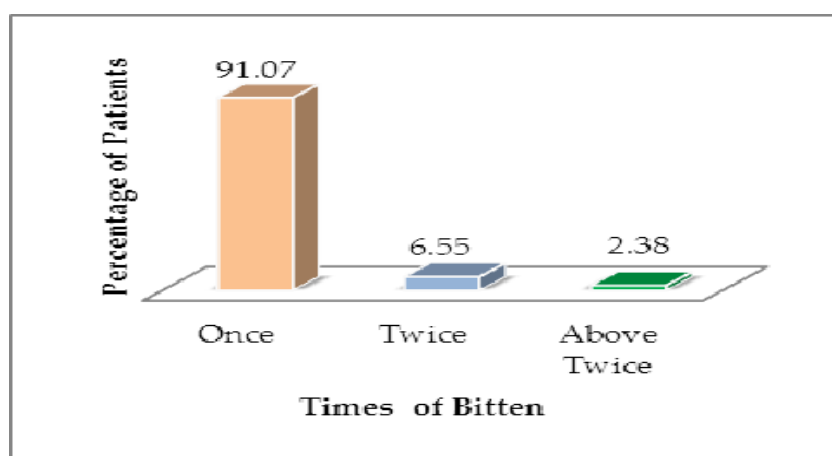


Figure 2: Times of dog bitten.

Table 3: Types of medicine used in dog bite.

Types of Medicine Used	Number of patients	Percentage (%)
Allopathic Medicine	49	29.17
Ethno-medicine	98	58.33
Both	21	12.5

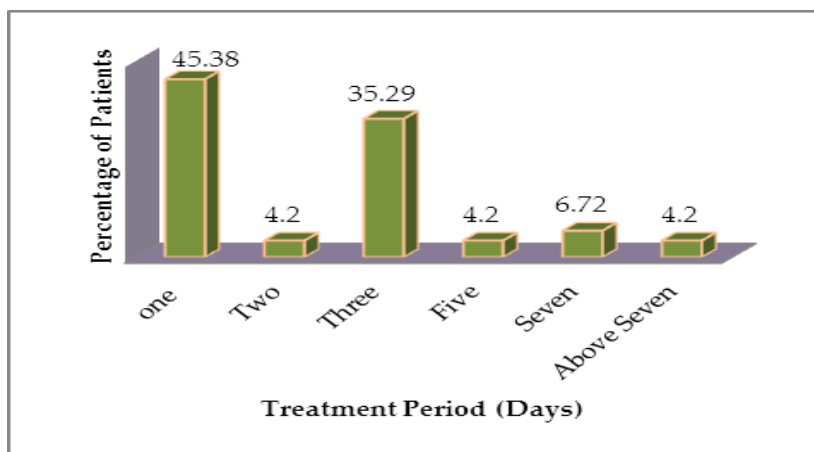
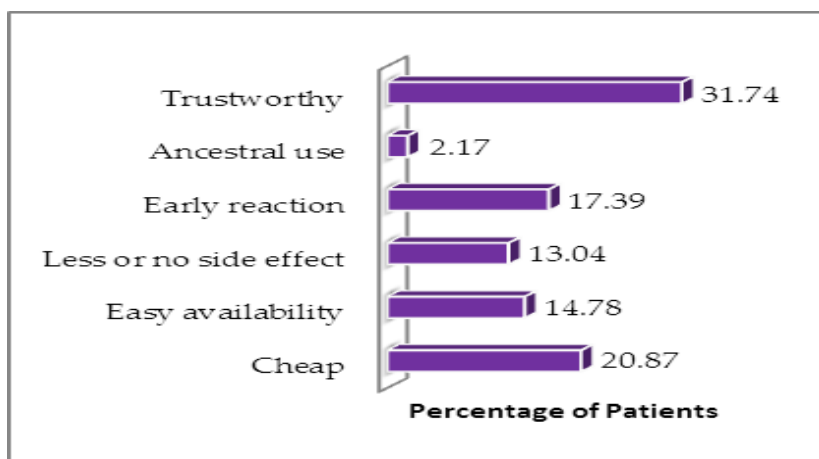


Figure 3: Treatment periods of dog bite.



**Figure 4: Reasons for use of Ethnomedicine.**

Most of patients used ethnomedicine as opposed to allopathic medicine and both medicine (i.e. ethnomedicine and allopathic medicine) for dog bite treatment (Table. 3). While according to patients and guardians, success rate of ethnomedicine was found to be 100% in used patients. They used ethnomedicine for 2, 3 4, 5, 7 days or more days but usually, one day (Figure. 3). This result suggested that they still depend upon ethnomedicine for dog bite as well other health manifestations. According to them, ethnomedicine is trustworthy, easy available, usually cheap having early reaction and less or no side effects (Figure. 4). On the other hand, they might not be aware about allopathic medicine or preference of ethnomedicine over allopathic medicine because of their poor socio-economic conditions. Pagadala et al (2015) suggested that individual having low economic background mainly depend upon traditional medicine for their dog bite while individual from strong economic status depend upon allopathic medicine.<sup>[8]</sup>

## 5. CONCLUSION

Thus, we can be concluded that people depend upon ethnomedicine for the treatment of dog bite. So knowledge of ethnomedicine should be conserved and commercialized which might help to increase the economic status of family. Besides this, people should be made aware about dog bite preventive education and allopathic medicine.

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### AUTHOR'S CONTRIBUTIONS

Dinesh Chaudhary and Sanjita Paudel prepared manuscript. Dinesh Chaudhary, Manoj Pandit and Suman Giri designed experiment. Sanjita Paudel, Dinesh Chaudhary, Manoj Pandit and Suman Giri involved in data collection and data analysis.

### CONFLICTS OF INTEREST

All authors declare no conflicts of interest.

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