

A Retrospective Study to Assess the Mortality and Morbidity Rate of Snake Bite and Distribution of Pamphlets on Preventive & First Aid Measures of Snake Bite in Maharashtra State

Rekha R.

Lecturer

Abstract: Snake bite is a neglected public health issue in many tropical and subtropical countries. Snakebite is an occupational, environmental and domestic health hazard with significant economic fallout on the individual and the family. There are 250 species of snakes in India, out of which about 60 are highly venomous. The venom of poisonous snakes may be predominantly neurotoxic or predominantly cytolytic. Neurotoxins cause respiratory paralysis and cytolytic venoms cause tissue destruction by digestion and haemorrhage due to haemolysis and destruction of the endothelial lining of the blood vessels. The estimated number of snakebites worldwide has been put as 5.4 million resulting in 2.5 million envenomation and 125, 000 deaths². Snake bite cases is increasing day by day therefore a retrospective study was done to assess the mortality and morbidity rate of Snake bite and distribution of pamphlets on preventive & First aid measures of Snake bite. The Objectives of the study was to know about mortality and morbidity rate of Snake bite. Design: Retrospective design was used. Research approach: Quantitative approach. Results: The collected data were analysed by descriptive statistics. In this study total 13 years data collected. Conclusion: It was found that the majority of the snake bite cases from Pune. In 2005 to 2018 thirty cases of snake bite was reported from Pune. Twenty-four cases from Ahmednagar, nine cases from Shirur, eight cases from Satara, six cases from Beed, five cases from Solapur & Daund, three cases from Indrapur, two cases from Raigarh, one case from Baramati, Shikrapur, Dhule & Gulbarga. Hence, we need to give awareness on preventive and first aid measures of snakebite in the community people and the booklet has to be keep in the emergency department in the hospital. It can be reduce the mortality and morbidity rate of Snake bite.

Keywords: Mortality, Morbidity, Snake bite, Preventive measures, First aid measure

1. Introduction

Snake bite is a major health problem through out the world, more so in tropical and sub tropical countries. In a predominantly Agricultural country like India with its rich ophia - fauna, the encounter between snake and the man is a frequent occurrence. With rapid urbanization and deforestation, snake bite cases form a significant group of hospital admissions. Prevention and appropriate first aid could reduce the incidence and improve the health outcomes for those who suffer bites. Snake bite is primarily a problem of the farmers when they involved in subsistence farming activities. Poor access to health services in these settings and in some instances a scarcity of anti venom often leads to poor outcomes and considerable morbidity and mortality. Many victims fail to reach hospital in time or seek medical care after a considerable delay because they first seek treatment from traditional healers. Some even die before reaching hospital. Hospital statistics on snakebites therefore underestimate the true burden. In addition to mortality, victims are often bitten in an agricultural field or jungle and in many instances the biting species is not identified. **IN WORLD:** According to the World Health Organisation, globally there are five million cases of snakebites each year leading to 81, 000 - 138, 000 deaths and 400, 000 amputations. **IN INDIA:** According to the World Health Organisation India has an estimated 2.8 million snakebite cases. **IN MAHARASHTRA:** Maharashtra recorded 19, 012 cases from rural areas and 5, 425 cases from urban spaces.

Problem Statement

“A retrospective Study to assess the mortality and morbidity rate of Snake bite and distribution of pamphlets on preventive & First aid measures of Snake bite in Maharashtra State.”

Objectives:

To study the mortality and morbidity rate of Snake bite.

2. Material and Methods

Research Design: Research design selected for this study is Retrospective Design

Research Approach: Quantitative approach

Setting: Tertiary Hospital

Population: All Snake bite cases

Sample: In this study All Snake bite cases from the year 2005 - 2018

Sample Size: In this study All Snake bite cases from the year 2005 - 2018

Sample Technique: Random Sampling Technique

Independent Variable: - Snake bite

Dependent Variable: - Morbidity & Mortality rates in patients with snake bite

Inclusion Criteria:

All Snake bite Cases admitted or brought dead in the hospital.

Exclusion Criteria:

Insect bite cases not included in the study.

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Plan for Data Analysis: After the collection of data all the data entered in master sheet and analyzed the distribution of snake bite cases. Descriptive statistics was used to analyze the data. Data was analyzed and presented in table.

3. Data Analysis and Interpretation

Data analysis and interpretation are the aspects of the research process as by these means only the pieces of information obtained in the study can be brought to the forefront.

In 2005 around Maharashtra 2 cases of snake bite was reported in Ahmednagar, one case at Daund & Indrapur.

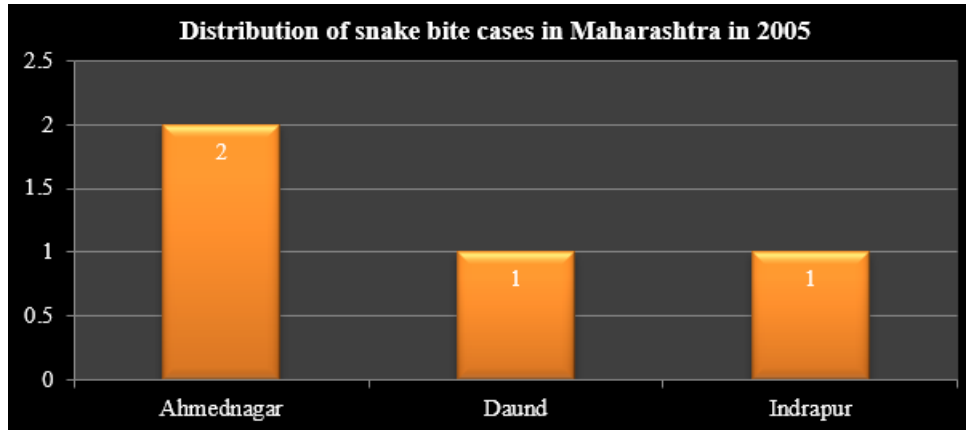


Figure 1: Distribution of snake bite cases in Maharashtra

Table No.2: Distribution of Snake bite cases in Maharashtra

In 2006 around Maharashtra Three cases of snake bite was reported in Ahmednagar, Three case at Shirur Two cases at Pune, Daund & Solapur.

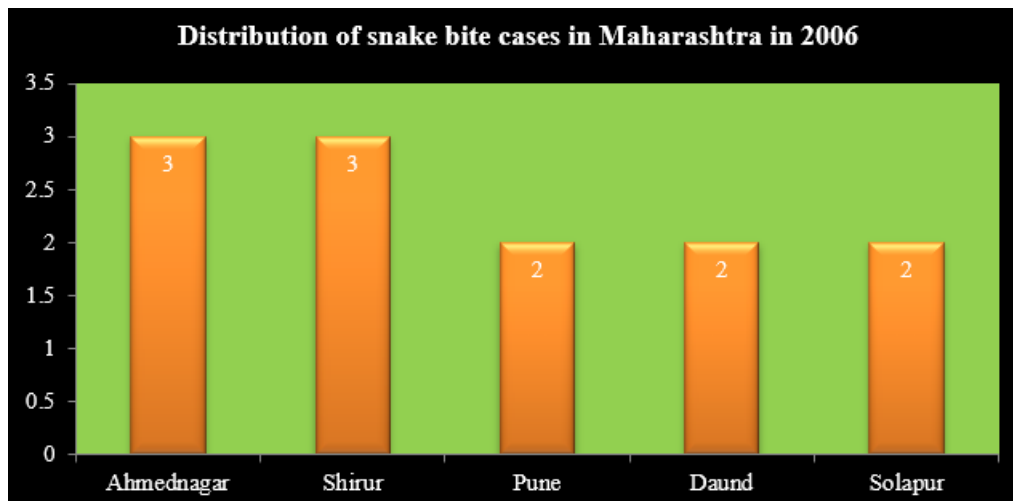


Figure 2: Distribution of snake bite cases in Maharashtra

In 2007 around Maharashtra Two cases of snake bite was reported from Pune, one case at Shikrapur, Ahmednagar, Daund

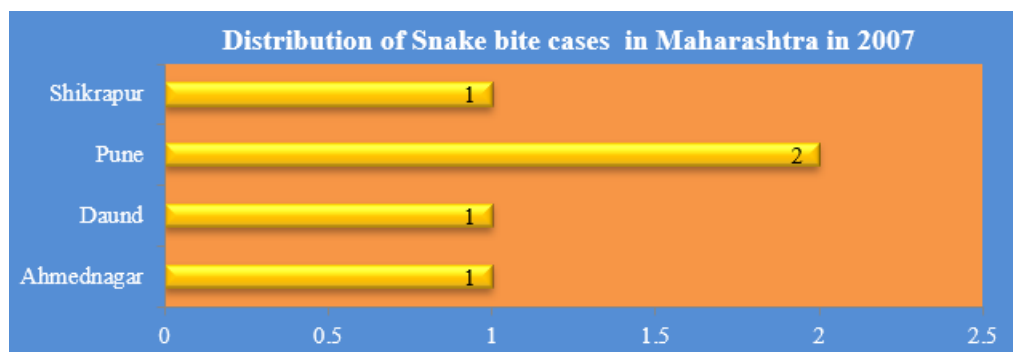


Figure 3: Distribution of snake bite cases in Maharashtra

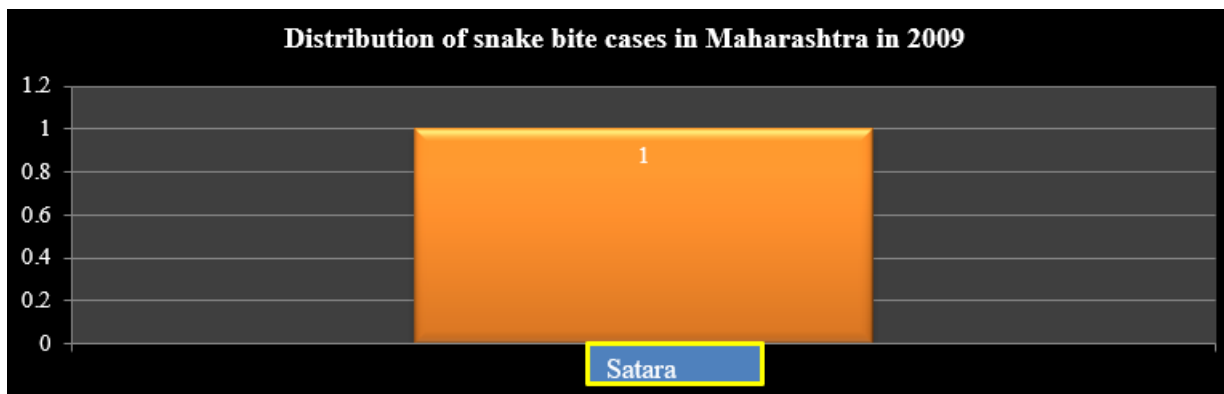


Figure 4: Distribution of snake bite cases in Maharashtra

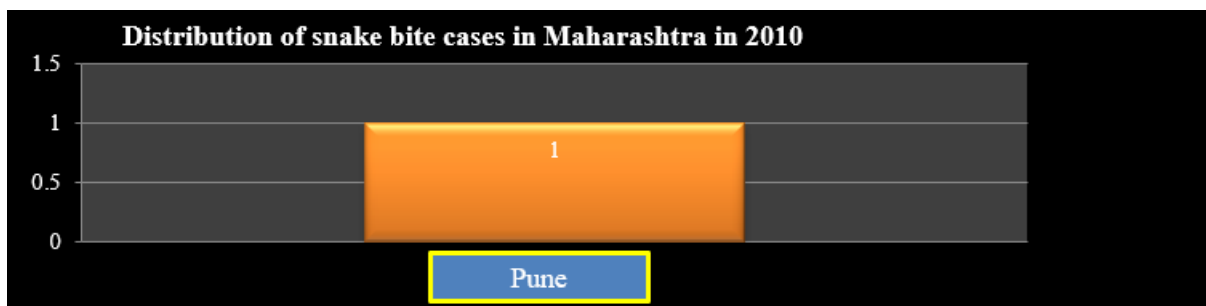


Figure 5: Distribution of snake bite cases in Maharashtra

In 2011 around Maharashtra three cases of snake bite was reported from Ahmednagar & Beed, Two cases from Pune and one case from Shirur, Shevgaon, Asti.

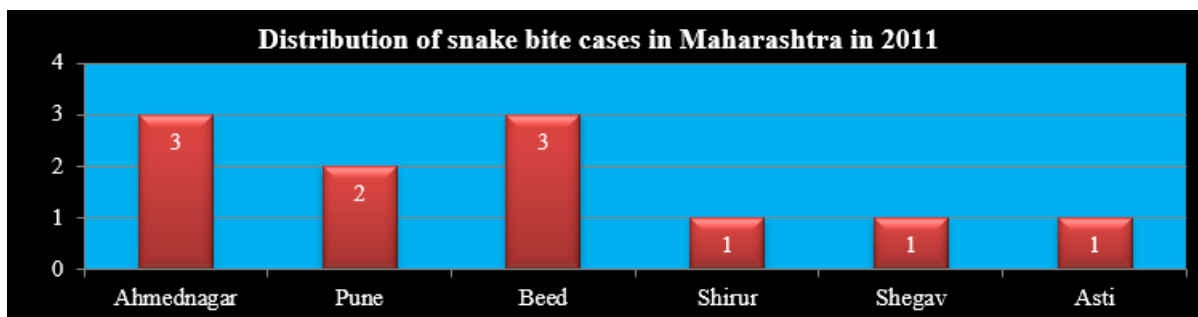


Figure 6: Distribution of snake bite cases in Maharashtra

In 2012 around Maharashtra five cases of snake bite was reported from Pune, two cases from Satara and Ahmednagar one case from Daund

In 2013 around Maharashtra three cases of snake bite was reported from Pune, one cases from Satara and Ahmednagar.

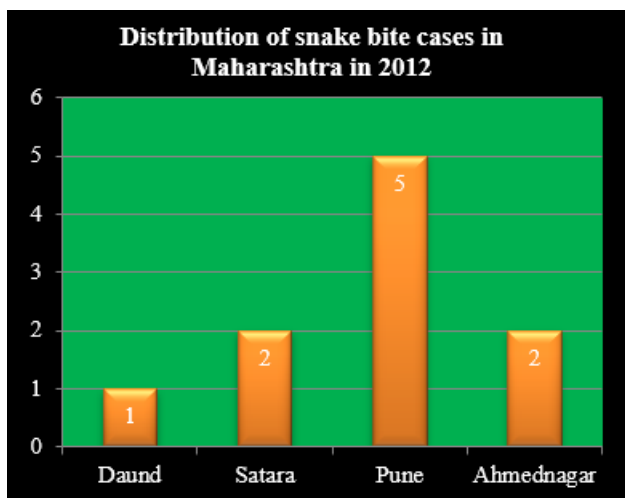


Figure 7: Distribution of snake bite cases in Maharashtra

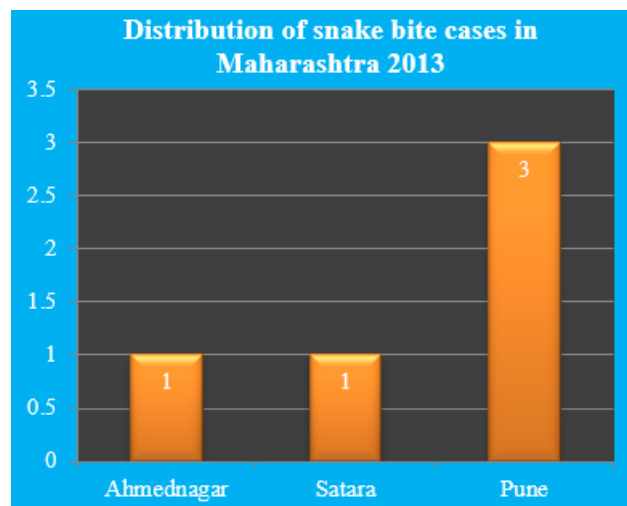


Figure 8: Distribution of snake bite cases in Maharashtra

In 2014 around Maharashtra four cases of snake bite was reported from Pune, one cases from Beed, Raigarh, Solapur

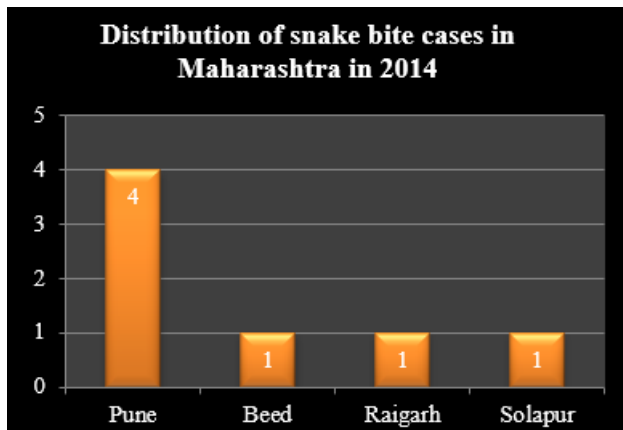


Figure 9: Distribution of snake bite cases in Maharashtra

In 2016 around Maharashtra two cases of snake bite was reported from Ahmednagar & Satara, one case from Dhule & Baramati.

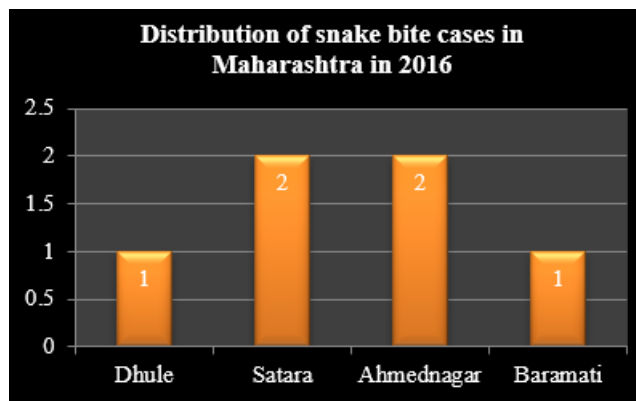


Figure 11: Distribution of snake bite cases in Maharashtra

In 2015 around Maharashtra one cases of snake bite was reported from Pune

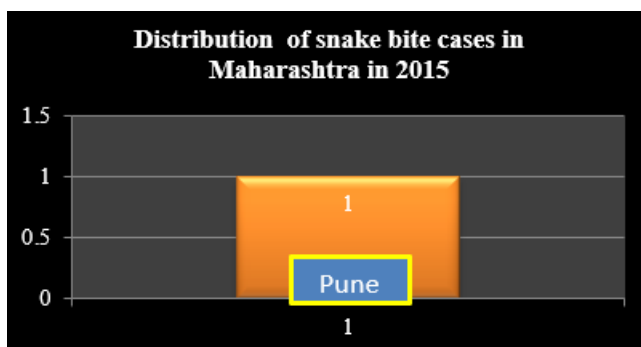


Figure 10: Distribution of snake bite cases in Maharashtra

In 2017 around Maharashtra six cases of snake bite was reported from Pune, five from Ahmednagar, two from Indrapur & Shirur & one case from Satara & Raigarh

Figure 12: Distribution of snake bite cases in Maharashtra

In 2018 around Maharashtra five cases of snake bite was reported from Ahmednagar, four from Pune, three cases from Shirur two case from Beed & Solapur, one case from Gulbarga.

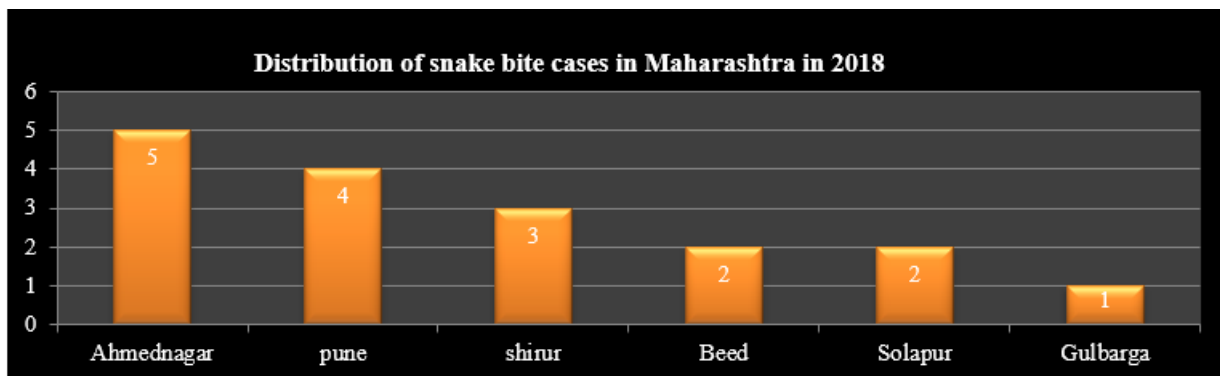


Figure 13: Distribution of snake bite cases in Maharashtra

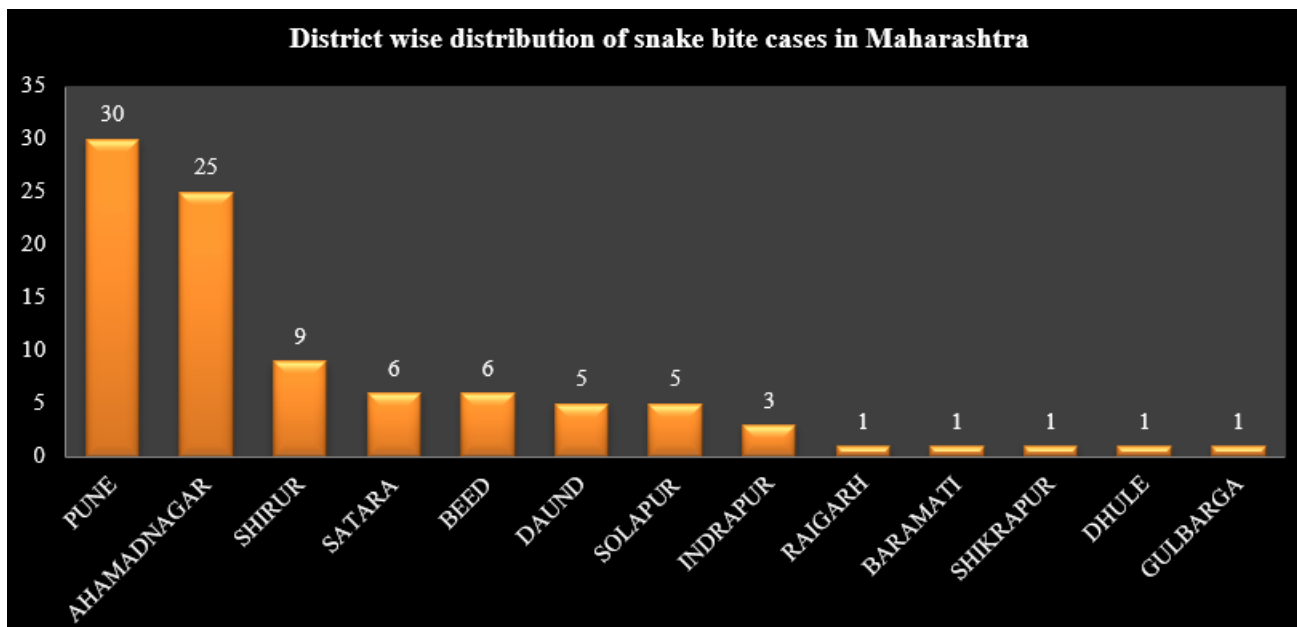


Figure 14: District wise Distribution of snake bite cases in Maharashtra

4. Conclusions

The finding of the study shows that mortality and morbidity rate of Snake bite. It was found that the majority of the snake bite cases from Pune. In 2005 to 2018 thirty cases of snake bite was reported from Pune. Hence we need to give awareness on preventive and first aid measures of snakebite in the community people and the booklet has to be keep in the emergency department in the hospital. It can be reduce the mortality and morbidity rate of Snake bite.

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