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Research Article

Snake Bite Cases in Karad

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Abstract: Most snakebites is caused by non-venomous snakes. Of the roughly 3,000 known species of snake found worldwide, only 15% are considered dangerous to humans. Snakes are found on every continent except Antarctica. In this 3 years retrospective study from Jan 2010 to Dec 2012, total of 505 snake bite cases which have been registered in the casualty of Krishna Institute of Medical sciences were analyzed at the Department of Forensic Medicine & Toxicology, KIMS, Karad. During this study several epidemiological observations and their results were considered. In the present study maximum numbers of victims belongs to 31-40 year age groups, and the sex ratio is 1.29:1. Most snake bite cases (461) occurred in rural area. Most importantly, it is well known that many patients are treated and die outside health care facilities – especially in rural areas. Out of 505 snake bit cases, poisonous snake bite case accounts in 218. The statistics are shocking, considering India is neither home to the largest number snakes in the world nor is there a shortage of anti-venom in the country.
Keywords: Snake bite, Mortality, Poisonous and non-poisonous snakes.

INTRODUCTION

Most snakebites is caused by non-venomous snakes. Worldwide, roughly 3,000 known species of snake are found and only 15% are considered dangerous to humans. Except Antarctica snakes are found on every continent [1]. The most diverse and widely distributed snake family is colubrids. It has approximately 700 venomous species under five genera: boomslangs, twig snakes, keelback snakes, green snakes, and slender snakes have caused human fatalities [2]. Envenoming following snakebite is a very common but globally neglected public health problem that primarily affects poor agrarian and pastoralist communities of Africa, Asia, Latin America and Oceania. It is estimated that more than 5 million people in the world suffer snakebite every year, among them 125 000 die and around 400 000 are left with permanent sequel. Surveys in Bangladesh and India have shown that the scale of this problem is far greater than suggested by hospital-based statistics and that these global figures greatly underestimate the actual incidence of snakebite envenoming and the resulting mortality and disability [3]. The worst-affected states in India are Kerala, Maharashtra, Tamil Nadu, Orissa, Assam and West Bengal. A health ministry official told Times of India, "The first few minutes after a snake-bite are crucial. Because there are no uniform guidelines, hospitals cause delay before the patient is put on effective treatment. Instead of going to the nearest hospital, villagers trust traditional healers who are often quacks" [6].

MATERIALS AND METHODS

In this 3 years retrospective study from Jan 2010 to Dec 2012, total of 505 snake bite cases which have been registered in the casualty of Krishna Institute of Medical sciences were analyzed at the Department of Forensic Medicine & Toxicology, KIMS, Karad. During this study several epidemiological observations and their results were considered. Consent was taken from the institutional ethics committee.

RESULTS

Table 1: Age Wise Distribution of Cases

Age (Years)	Number of Cases
1-10	21
11-20	33
21-30	98
31-40	140
41-50	95
51-60	54
61-70	30
70-80	20
>80	14

Average age was 34.6 years. Maximum number of cases seen in the age group: 21-30 yrs.

Table 2: Sex Wise Distribution of Cases

Sex	Number of Cases
Male	285
Female	220
Total Cases	505

Male to female sex ratio was 1.29:1

Table 3: Place Wise Distribution of Cases

Place	Number of Cases
Rural	461
Urban	044
Total Cases	505

Rural to urban ratio was 10.4:1

Table 4: Venom Wise Distribution of Cases

Type of Venom	Number of Cases
Non poisonous	287
Neurotoxic	31
Vasculotoxic	187

Non poisonous to poisonous ratio was 1.3:1

DISCUSSION

In the present study maximum number of victims belongs to 31-40 year age groups, and the sex ratio is 1.29:1. Most snake bite cases (461) occurred in rural area. Most importantly, it is well known that many patients are treated and die outside health care facilities – especially in rural areas. Out of 505 snake bit cases, poisonous snake bite case accounts in 218. Snakebites and snakebite fatalities peak during the monsoon season, probably reflecting agricultural activity, flooding, increased snake activity, and abundance of their natural prey. The most common symptoms of all snakebites are overwhelming fear, which may cause symptoms such as nausea and vomiting, diarrhea, vertigo, fainting, tachycardia, and cold, clammy skin. Dry snakebites, and those inflicted by a non-venomous species, can still cause severe injury. Most snake bites, whether by a venomous snake or not, will have some type of local effect. There is minor pain and redness in over 90% of cases, although this varies depending on the site. Bites by vipers and some cobras may be extremely painful; with the local tissue sometimes becoming tender and severely swollen within 5 minutes. This area may also bleed and blister and can eventually lead to tissue necrosis.

Bijayeeni M *et al*., conducted a nationally representative study of 123,000 deaths from 6,671 randomly selected areas in 2001–03. A total of 562 deaths (0.47% of total deaths) were due to snakebites. It occurred mostly in rural areas (97%) and was more common in males (59%) than females (41%). It was peaked at ages 15–29 years (25%) during the monsoon months. It was reported that annual snakebite deaths were greatest in the states of Uttar Pradesh (8,700), Andhra Pradesh (5,200), and Bihar (4,500) [4].

Wanje SD in a study reported, the majority (71.83%) of the snake bite victims were in the age groups of 10 to 39 years. It was 1.7 times more in males than females. About two third cases were bitten on lower extremities during day time by poisonous snakes. Most common presenting symptoms at the site of bite were pain, swelling and burning sensation with few cases having blister formation, tissue necrosis and bleeding from the site of bite. Overall mortally rate was 5.68% [5].

CONCLUSION

The statistics are shocking, considering India is neither home to the largest number snakes in the world nor is there a shortage of anti-venom in the country. India had finalized a national policy that would ensure fast and effective use of anti-venom, besides making it available to healthcare centre's in backward villages. The policy was to help train doctors who had inadequate knowledge on how to deal with the neuro-toxic shock that the patient experiences following a snake bite besides providing guidelines for hospitals conducting research on the subject. However, the Union health ministry is yet to aggressively push its implementation.

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