

## MENACE OF SNAKE

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### ABSTRACT:

**BACKGROUND:** Pakistani population is suffering from combine load of both communicable disease (CD) and Non-communicable disease (NCD). This combine load of CD and NCD is over whelming load on health and financial system. Annually nearly 40,000 snake bite cases and 8200 deaths are being reported in Pakistan.

**OBJECTIVE:** To determine the incidence of snake bite reported in Rural Health Center Chountra, District Rawalpindi, Pakistan.

**METHODOLOGY:** Descriptive study conducted at Rural Health Center, Chountra, district Rawalpindi, Punjab, Pakistan. Health facility medical records from 1<sup>st</sup> Jan, 2011 – 31<sup>th</sup> Dec, 2013 were assessed and observations recorded by systematic sampling technique using self-constructed data collection form. The study completed in 2 months (1<sup>st</sup> June, 2015 to 31<sup>th</sup> July, 2015)

**RESULTS:** Total number of snake bite victim reported were 71 from 1<sup>st</sup> Jan, 2011 to 31<sup>th</sup> Dec, 2013. The cases reported were 25, 22, 24 in year 2011, 2012 and 2013 respectively. The highest number of cases were reported in months of June and July. Higher number of male victims as compared to the females. The higher number of cases, 38 out of 71 belonged to the age group 21 – 40 years.

**CONCLUSIONS:** Snake bite imposing significant burden on health service despite of the fact that it is preventable. There is urgent need of awareness program for general public and capacity building of health care providers.

**KEY WORDS:** Snake bite, Rawalpindi, Pakistan.

### INTRODUCTION:

Snake bite is considered to be a grave public health menace world-wide, especially in tropical and subtropical countries. In most of the countries, public health department is non-functional, doing little to control this important problem.<sup>[1,2]</sup>

Public health authorities don't know exact world-wide load of snakebite even though several attempts to estimate it, except in a few countries where reliable figures on incidence, morbidity, and mortality are available. Highest number of cases were reported in South Asian

region according to WHO.<sup>[1,3]</sup> Among third world countries more than 20,000, 33000 cases of envenoming occur each year in Nepal and Sri Lanka respectively.<sup>[3,7,8]</sup>

Snake bite is also considered as job-related disease for farmers and fishermen.<sup>[4, 17-18]</sup> Bites most commonly seen in individuals of younger age group men, and commonest bite site is lower limbs. Seasonal variation was also

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observed with higher incidence during rainy season and harvesting. Natural disasters like floods also increase incidence of Snake bite.<sup>[5-6]</sup> This study was conducted to assess the magnitude of snake bite in rural locality of district Rawalpindi, Pakistan

**METHODOLOGY:**

This was a retrospective descriptive study conducted at Rural Health Center, Chountra, district, Rawalpindi, Punjab, Pakistan. Retrospective health facility medical records from 1<sup>st</sup> Jan, 2011 – 31<sup>th</sup> Dec, 2013 were assessed and observations recorded by

systematic sampling technique using self-constructed data collection form. The following ethical considerations were followed, written permission to conduct study was obtained from Medical officer in-charge RHC Chountra and identity of subjects was kept confidential. The study was completed in 2 months (1<sup>st</sup> June, to 31<sup>th</sup> July, 2015)

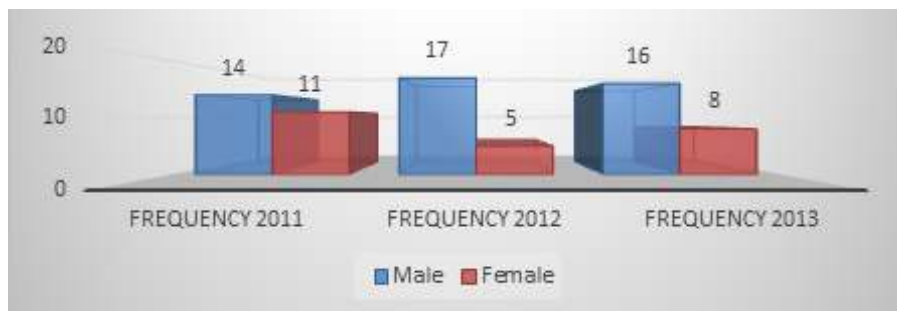
**RESULTS:**

Table 01 shows month Wise Distribution of Snake Bite Cases from 1<sup>st</sup> Jan, 2011- 31<sup>th</sup> Dec, 2013. Highest number of cases reported in months of June and July. Total number of snake

**Table 01: Month Wise Distribution of Snake Bite Case Jan2011- Dec 2013**

Month	Frequency 2011	Frequency 2012	Frequency 2013	Total Cases
Jan	0	0	0	00
Feb	0	1	1	02
Mar	2	1	0	03
Apr	1	2	1	04
May	3	2	4	09
Jun	6	5	4	15
Jul	4	6	7	17
Aug	5	4	5	14
Sep	2	1	1	04
Oct	1	0	0	1
Nov	0	0	1	1
Dec	1	0	0	1
Total cases	25	22	24	71

Fig 01 shows gender distribution in Snake Bite Cases from 1<sup>st</sup> Jan, 2011 –31<sup>th</sup> Dec, 2013. It shows higher number of male victims as compared to the females during this three year period (1<sup>st</sup> Jan, 2011 – 31<sup>th</sup> Dec, 2013)



**Fig. 01. Gender distribution Snake Bite Cases Jan 2011 - Dec 2013.**

Table 02 shows Age Distribution among Snake Bite Cases during 1<sup>st</sup> Jan, 2011 – 31<sup>th</sup> Dec 2013. It shows that 38 out of 71 cases were reported for age group 21 – 40 years.

**Table 02: Age Wise Distribution of Snake Bite Case Jan 2011 – Dec 2013**

Age	Frequency 2011	Frequency 2012	Frequency 2013	Total Cases
0 – 10	2	1	2	05
11 – 20	3	4	5	12
21 – 30	7	7	5	19
31 – 40	6	6	7	19
41 – 50	5	3	4	12
51 – 60	2	0	1	03
61+	0	1	0	1
Total Cases	25	22	24	71

bite victim reported were 71 from Jan 2011 to Dec 2013. The cases reported were 25, 22, 24 in year 2011, 2012 and 2013 respectively.

#### DISCUSSION:

Snake bite is common public health problem, affecting all parts of Pakistan and high risk groups include rural population, farmers, people sleeping out doors because of frequent contact with snakes. <sup>[15]</sup> Total number of snake bite cases reported from 1<sup>st</sup> Jan, 2011 to 31<sup>th</sup> Dec, 2013 were 71. Most of the cases were reported during summer season (Month of June with highest number of cases). Three year emergency department record showed predominance of male victims than the females. Age group 21-40 years was more vulnerable than others. Commonest site of bite was lower limb. These results are consistent to the study conducted in India, which showed peak incidence during June-September and more cases among males (76%). <sup>[9]</sup>

Our study showed age group 31-40 years with highest number of cases in contrast to the Sri Lankan study which showed (48%) of cases among age group 6-12 and 15-24 years. <sup>[10]</sup>

A study conducted at Liaquat University Hospital Hyderabad/Jamshoro, Sindh, Pakistan<sup>[15]</sup>, showed male to female ratio 4:1, (80%) of bites on the legs below knee, consistent to our study.

Two separate studies were conducted in the Thar Desert, Sindh, Pakistan<sup>[15]</sup> and Srilanka<sup>[16]</sup>

showed that high incidences were reported during agricultural activity and during summer season (75%) and (70%) of victims were males having bites mostly on lower limbs (83%), these findings are quite similar to our study.

#### RECOMMENDATIONS:

Our study provides following recommendation to general public and higher health authorities:

1. People working in fields should use long rubber shoes as they are more at risk of snake bite and the commonest site of bite being lower limb.
2. Higher number of cases reported during summer so more ASV to be provided during summer instead of uniform supply.
3. During floods there are chances of more cases so health emergency should focus on this aspect by providing more ASV.
4. Farmers are at more risk, so more ASV to be provided in rural health centres as compared to urban health centers.

#### CONCLUSION:

Snake bite imposing significant burden on health service despite of the fact that it is preventable. There is urgent need of awareness program for general public and capacity building of health care providers.

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Submitted for publication: 01.07.2017  
 Accepted for publication: 15.10.2017  
 After Revision

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