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Snakebite management through free emergency ambulance service in Himachal saves lives

KEYWORDS

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BACKGROUND:

Snake bites are a common cause of morbidity and mortality in the hills. The risk of snake bite is high due to the presence of a huge fauna flourishing in a favourable temperate climate--low environmental temperature and heavy rainfall. . In India, there are 236 species of snakes of which three (Cobra, Karat & Viper) species are dangerously venomous. Every half an hour a death occurs due to snakebite in India and total mortality due to snakebite in India has been estimated to be 49, 500¹. Delayed presentation to hospital frequently contributes to increased morbidity and mortality from snake bites. The timely and free ambulance service can save lives and lessen morbidity due to snakebites. This study aims at evaluating how a free, round the clock emergency ambulance service having facilities for anti-snake venom injection, can help save lives by responding to a toll free number 108 and transporting the patient to nearest appropriate hospital within golden hour.

METHODS:

A total of 469 patients of snake bite cases availed the free emergency ambulance service i.e. from 25 December 2010 to 30th November 2011 by dialling toll free number 108. All patients were examined for evidence of snake bite and where possible the snakes were identified based on description, identification (if the snake was brought) and symptoms of envenomation. Based on signs & symptoms ASV was used inside the ambulance, where applicable. All patients were shifted within golden hour to the nearest appropriate health facility.

RESULTS:

Seasonal variation in snake bite was seen with a peak in the months of August. No bites were recorded in December, January and only one case in February. Highest snake bite cases were reported in August (27%). 76% of the bites were on the feet (up to the ankle) whereas 22% bites were on hands (figure & elbow) and only in 1% cases on lower back and head. Female to male ratio was 54:46 percent. The age group most affected was between 11- 40 years (56%), in this highest affected age group was 21-30 year (24.9%). Most bites occurred while the person was cutting grass, working in the fields or walking in the hills (75.3%). Snake bites while sleeping were at uncommon sites (Ear and Head). Highest 22.38% cases were reported in warm Kangra district just opposite to cold tribal district of Lahul and Spiti where only one case was (0.21%) reported. Out of 469 cases in 47 cases (10.02%) ASV had to be used in-

side the ambulance in critical condition. Only one patient had mild allergic reaction and life saved after ASV utilization was 42 (89.36%). Total life saved out of 469 cases was 451 cases i.e. 96.2% of snakebite victims as followed up to 48 hours.

CONCLUSION:

Snake bites occur frequently in the hills of Himachal Pradesh. The initiation of toll free and user charge free emergency ambulance service 24X7 called Atal Swasthya Sewa in PPP mode with GVK-EMRI helped snakebite victims to call the service anytime in emergency. This instead helped us save more than 451 precious lives in the state of Himachal.

Recommendation: We recommend a fully equipped free emergency ambulance network all over India to save people in emergencies, especially those of snakebites to save more and more lives without losing time and within golden hour. All ambulances need to be fully equipped with anti-snake venom vials (ASV) to help snakebite victims on way to hospitals.

Acknowledgements: We sincerely thank government of Himachal and GVK-EMRI for this initiative and data sharing.

Fig 1: Cobra- A common and poisonous snake found in India.



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