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REVIEW ARTICLE

Management of Snake Bite by Indian Quackery: A Medical Mockery

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ABSTRACT

Snake bite is one of the common public health problems especially in developing countries leading to increased morbidity and mortality. Delay in access to appropriate medical services and increased local practices of envenomation further complicate the scenario. Indigenous treatment systems, quacks and many first handlers in snake bites attribute to significant morbidity, end organ damage, septic complications further causing death, increased hospital stay and eventually increased economical burden on our existing health care system. Alleviation of such practices through stringent law and policy making with increased education and mobilization for appropriate medical management, supportive first aid and regular timely supply of anti snake venom is quintessential and need of an hour to curb the devastating complications due to snake bite and leading to improved clinical outcome.

Snakebite injuries especially in Indian context have been a subject of considerable interest since centuries. Through several decades have observed amalgamation of several medications, procedures and natural therapies to alleviate the trauma and suffering caused by snake bites which is identified as a common occupational hazard[1].

Snake bite is one of the big neglected public health problems especially in developing countries, primarily affecting rural and suburban population. It is reported in literature as one of the common occupational hazard mainly in farmers and labourer's causing morbidity and mortality in them. The most high-flown regions worldwide is South East Asian region owing to huge population and extensive agricultural practices. The WHO has included snake bite as one of the neglected tropical conditions in 2009[2].

The true global burden of complications and deaths due to snake bite is not well known due to paucity of standardized reporting and underreporting is one of the problems especially in developing countries. It is documented that there are total of 54, 00,000 snake bites with 50,000 envenomation done and 1, 25,000 fatalities annually worldwide[3]. Majority of snake bites associated fatalities occur in Asia, Southeast and sub-Saharan African region. To the best of our knowledge, India reports major burden and one of the highest mortality due to snake bites[3]. Average annual estimates of snake bites -81,000/ year and estimates of deaths due to snake bite ranges from 1,300-50,000 with geographical variation across different states leading to statistical disparity[4]. However, there are no precise statistics of morbidity and mortality and is underestimated due to tendency and behaviour of majority of snake bite victims to approach traditional healers for treatment and unregistered medical personnel –"quacks".

Fatality due to snake bite is multifactorial with attributes-species variation and virulence in snakes, lack of appropriate

and timely supply of anti-snake venom (ASV), poor compliance to standard treatment regimen, absence of appropriate public education and clear administrative policy to deal with this public nuisance. There is paucity of data especially in our settings focussing on how to deal with emergencies in case of snake bite.

Behavioural and social practices with undue trust on traditional healers and Indian quacks further complicates existing scenario. Moreover, high death rates in snake bite injuries is ascribed to superstition , unawareness and more access to indigenous practitioners having lack of experience in handling such cases[5].

Snake bite is considered as one of the common medical emergency, where judicious and timely management leads to reduction of morbidity, mortality and decreased rate of complications. Lack of information about prevention of occupational hazards and inappropriate first-aid measures magnify the risk of medical and surgical complications in further clinical course post snake bite. Continuous knowledge about prevention and treatment of snakebite at the, village and rural levels is essential and need of the hour especially in settings of prevailing competition from unregistered 'medical practitioners'[6]. Providers of spurious snakebite remedies have a big flourishing market amongst the superstitious rural and semi-rural communities, and their prevailing practices are not curtailed due to lack of effective and stringent laws to prevent use of fraudulent and deceptive 'treatments'[7].

These practices without any evidence of sterilization and technique with putting multiple random cuts on affected limb has hazardous implications leading from severe pain, infection, cellulitis , necrotising fasciitis with progression to shock and death. Usual traditional practices involve, suction of venom from the bite wound using mouth or devices should be discouraged because of no proven benefits following artificial envenoming and potential for local skin necrosis based on experimental and anecdotal experiences. Another ignorant practice involve cleaning of bite site and application of raw ice, ice packs, cold sprays, or immersion of affected site in ice water to achieve reduction in venomous activity via cold induced vasoconstriction and consequent reduction in tissue damage and venom-induced pain, however its prolonged application is associated with vasoconstriction of the already compromised tissues which may result in local tissue necrosis, gangrene, and the need for amputation[8]. The picture illustrates development of cellulitis after multiple insertions and skin piercings immediately post snake bite attempted by quack regional practitioner to curb systemic spread of venom.

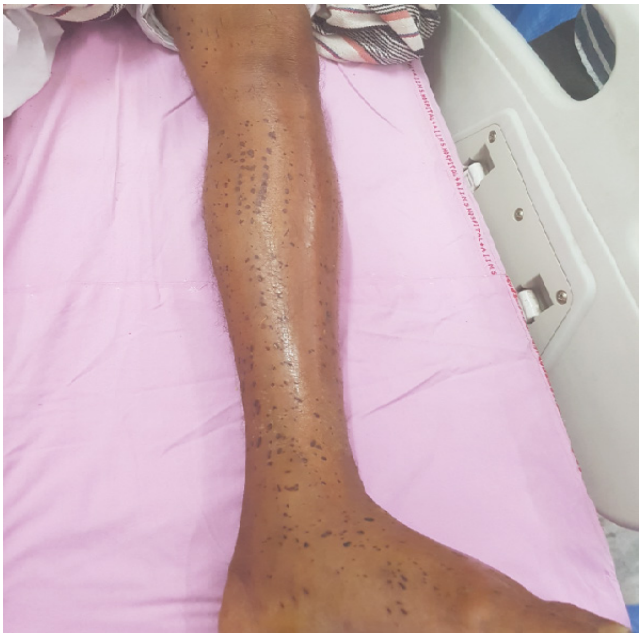

Fig. 1: Multiple stabs done in lower limb after snake bite by local personnel - leading to cellulitis

In above mentioned case, after this practice, with no response he rushed to our hospital and we could stabilize him through envenomation and treated his cellulitis with successful clinical outcome. These cases reveal and illustrate potential devastating complications caused by such spurious indigenous practices which are just tip of iceberg and need of hour is to condemn and strongly oppose such practices and interventions.

To conclude, the public must be educated about the dangers of being treated by unqualified practitioners. It is important to make them aware of their limitations and repercussions of ill treatment. Snakebite remains an underestimated cause of deaths especially in developing countries including India. At administrative level, stringent policies and laws to be made and aggressively implemented to halt implementation of improper and clinically dangerous practices. It is the need of the hour that the chain of responsible administrative bodies at every level make a note of this mockery to make adequate reforms by all the available mechanisms. Relentless education, appropriate strengthening of medical services, adequate training of medical staff and better, timely access of antivenom are essential prerequisites to reduce snakebite deaths in India.

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