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PUBLIC AWARENESS OF VENOMOUS SNAKES IN SRI LANKA AND INDIA

Introduction

Snakes are type of reptiles that live in wide range of habitats such as forests, swamps, grasslands, deserts and in both fresh and salt water. Some are active at night, while some are active throughout the day. Snakes are predators that consume insects, bird's eggs, young birds. They are cold blooded animals, that cannot be survive in extremes environmental conditions, such as hot summer and winter. There are venomous and non-venomous snakes.3000 species of snakes can be found all around the world, 20 % of them are venomous and only 7 % of venomous snakes could be fatal to human [1]. Snakebite is an injury that can be caused by venomous or a nonvenomous snake. Venomous snake bite can be deadly , even the non-venomous snakebite may cause an allergy rection or an infection. Snake venom is a highly toxic saliva, which contain zootoxins that has the ability to cause immobilization and digestion of prey. It also provide defense against threat.

There are 96 species of snakes in Sri Lanka. Among them, 50 species are endemic to the island, 13 species are sea snakes and 10 species are blind snakes. India inhabited with more than 300 species of snakes. The most common and the most lethal snakes identified in Sri Lanka and India are cobra, common krait, Russell's viper, and saw-scaled viper. Cobra's venom is with powerful post-synaptic neurotoxin and cardiotoxin that cause paralysis of muscles, respiratory failure and cardiac arrest. Presynaptic neurotoxins with phospholipase A2 activity called -bungarotoxins are present in the venom of the krait, which cause irreversible paralysis that cannot be cured with antivenom. Russel's viper venom cause mild neuromuscular dysfunction. The primary hemotoxic and cytotoxic properties of saw-scaled viper's venom prevent blood from clotting and significantly damage cells and tissues.

In Sri Lanka, the annual snakebite incidence is around 400 per 100,000 persons, or 80 000 snakebites per 20 million people. In India, 64000 people die due to snakebites, which is the highest number reported in worldwide [2]. Both countries are with large population involving in agriculture, plantation workers and rural inhabitants that increase the vulnerability to snakebites. Snake bites are a global health problem associated with high morbidity and mortality. Therefore, the study of public awareness of snake bites and their danger to human health is relevant.

Goal

Examine public awareness about poison snake in Sri Lanka and India

Material and Method of research

The survey was attended by people live in Sri Lanka and India. A total number of 70 responders with complete data was included in the survey. Participants are aged from below 18 years to above 30 years with a mean age of 25 years. Sri Lankan medical students studies in local medical university and do practical in local hospitals (18), Sri Lankan and Indian medical student from Gomel State Medical university (30), individuals who are not involved in medical field from both countries participated in the survey (22). The questionnaire designed with questions only for individuals involved in medical field and questions for all participants.

The literature on the problem of snake bites in these countries were studied. A static analysis and interpretation of the results of the responses of the respondents on the problem of venomous snakes and their bites was carried out.

Research, Results and Discussion

Based on the results of the survey, questions for both medical students and individuals not related to medical field, majority of the participants selected the right answer for number of species of snakes present in Sri Lanka and India, which is more than 25 species of snakes. Following majority are clueless. Dizziness 43 (61.4 %) and nausea 36 (51.4 %) are the most selected symptoms of snakebites. 28 (40 %) chest pain, 7 (10 %) die immediately, 4 (5.6 %) local changes such as pain with redness, swelling were selected while 11 (15.7%) individuals lacking knowledge about symptoms of a snakebite. Attitude towards snakes in country was questioned, most of the responses are afraid of snakes, while 20 (28.6 %) snakes are respected, since snakes are part of culture and 13 (18.5 %) chose that snakes should be killed. According to participants' opinion, reasons for snakebites, people are inattentive when visiting forest like area, people invading snakes' habitat mentioned equally. The most common category of individuals susceptible to snakebites were stated as villagers 37 (52.9 %).In case of discover a snake in home, majority of the participants would call the rescuers 26 (37.1 %) , while 28 (40 %) drive away the snake, 7 (14.3 %) kill the snake and 6 (8.6 %) run out of the house. Most of the responders are with moderate knowledge to identify the snakes 31 (44.3 %), 15 (21.4 %) are with better ability, remaining 15 (21.4 %) lacking knowledge to identify snakes. 17 (24.3 %) have good knowledge, 37 (52.9 %) have moderate knowledge and 16 (22.9 %) without knowledge about snakebites. Majority 53 (75.7 %) of the responders are with motive to study about snakebites. 14 (20 %) of the participants experienced snakebites while 34 (48.2 %) have encountered a person with snakebite. Out of 14 people, who experienced snakebites, 3 individuals presence with persistent effect of snakebites, and 4 people experienced severe reaction during antivenom administration.

27 (38.6 %) of participants without knowledge about first aid management in snakebites. 4 options were listed as first thing to do following a snakebite, 45 (64.3 %) chosen the right answer which is stay calm and remove tight clothes, 25 (35.7 %) chosen incorrect answers such as suck the venom out from patient, apply ice on bitemark, apply lotion or ointment. According to majority 58 (82.6 %), there is a requirement in special training for snakebite management. Participants were given with multiple choices to select the source of information about snakes, snakebites, snakebite management, most selected sources were television and internet/social media. 37 (52.9 %) agreed on Cobra is the most common snake while, 12 (17.1 %) common krait, 14 (20 %) Russell's viper and 7 (10 %) listed Saw scaled viper, Pit viper and hump nosed viper. Majority 56 (80 %) chosen to seek medical attention first from the nearest hospital, while 14 (20 %) would attend allopathic treatment.

According to 49 (70 %) individuals, all snakes are fatal. 45 (64.3 %) stated that antivenom is effective to all types of snakes, which is incorrect opinion, since antivenom cannot cure every snakebite. Majority 40 (57.1 %) have stated that the nearest hospital is in manageable situation in treatment for snakebite, while 10 (14.3 %) mentioned inadequate facilities.

According to majority 49 (70 %), there is lacking of public awareness programs on snakes and snakebites and participants have stated wide range of preventive measures for snakebites such as killing snakes, use of protective wear, clean the surrounding environment and increase the public awareness about snakes and snakebites.

Medical students were questioned and responded (45.6 %) that majority of people attend to hospital after developing complications due to snakebites. 58.6 % of them, responded that decision of giving antivenom is when systemic envenoming/local envenoming of cobra, 18.6 % local envenoming and 22.9 % only history of snakebite. In Sri Lanka and India, after a snakebite, except cobra bite, observe the patient at least for 24 hours and in case of presence of signs of systemic envenoming only antivenom is given [5, 6].

Conclusion

1. Respondents indicated their own carelessness and inattention, as well as the field of activity (work in agricultural fields) as the main reason for being bitten by snakes.

2. Respondents indicated the Internet and television as the main source of knowledge about awareness of snake bites and first aid.

3. Most people tend to go to the hospital only after developing complications from a snakebite, but 20 % seek allopathic therapy.

4. Based on responders opinion, the public awareness about snakes and snakebites in Sri Lanka and India has to be improved.

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EPIDEMIOLOGY OF MALARIA IN SRI LANKA: STATISTICS FROM YEARS 2010 TO 2020

Introduction

For centuries, malaria has caused devastating epidemics in Sri Lanka, killing thousands, impoverishing communities and undermining the country's development. Today, this island of about 22 million inhabitants is malaria-free. In Sri Lanka, Plasmodium vivax and Plasmodium falciparum accounted for most infections while there were a few cases due to *Plasmodium malariae* and *Plasmodium ovale*. The principal vector is *Anopheles culicifacies* species.

People infected with malaria often experience fever, chills and flu-like illness at first. Left untreated, the disease can lead to severe complications and, in some cases, death. Malaria symptoms appear after a period of seven days or longer after an infective mosquito bite [1, 2].

Goal

The main aims of the report highlighted upon the epidemiological status of malaria in Sri Lanka. An evaluation of the effectiveness of the treatments, detection and preventive measures undertaken were analyzed that demonstrate a good example on the prevention of this disease at its maximum.

Materials and Research Methods

The information was acquired using the current statistical reviews on the spread and prevention of malaria in Sri Lanka, with records held by the online publishments by the Ministry of Health of Sri Lanka-the health bureau, research sites like PubMed and also the World Health