

## National Workshop on Venomous Scorpions, their identification features, first aid and clinical treatment for scorpion sting

A national level workshop entitled “Venomous Scorpions, their identification features, first aid and treatment for Scorpion sting” was organized by the Department of Zoology & Wildlife Biology, Government Arts College, Udthagamandalam, The Nilgiris, Tamil Nadu on 13.10.2017 to enrich scientific knowledge on proper identification of scorpions, first aid and clinical treatment for Scorpion sting for teachers, forest field level staffs, conservationists, naturalists, wildlife photographer and representative from NGO’s took part in the workshop totalling to 230 participants.

P. Kannan, during the inaugural said that scorpion sting is an acute life threatening medical emergency. A substantial number of scorpion sting incidences, human deaths and long-lasting complications or life-long disabilities could be avoided by some knowledge of proper identification of scorpions, precautions against scorpion and proper mode of treatment and by becoming more familiar with them by learning to recognize them, by knowing the environs they frequent and their behaviour. Hence this workshop was organized to pave the way to prepare an Alogrithm for general identification of the major kinds of scorpions based on their venomous nature, enriching scientific knowledge on first aid and clinical treatment for scorpion sting to save thousands of life from scorpion sting cases. Moreover this workshop was planned to showcase to study the scorpions which have medical significance, scorpions which commonly cause deaths or serious disability to humans.

During the inaugural Amar Kushawha, I.A.S the Project Director, Special Area Development Program, said that, scorpion



**Welcome address by Dr. P. Kannan, Asst. Professor and Organising Secretary**

sting is a serious medical, social and economic problem in many parts of the world, especially in the tropical and subtropical countries. Reasons may be because of its high population density, widespread agricultural activities and prevalence of venomous scorpion species. Scorpion sting mostly happen in rural areas, majority of scorpion sting happens at night and the mortality rate is highest in rural areas due to poorly constructed houses, providing easy access to scorpions and manual jobs in agricultural fields. Moreover, students, forest field level staff, naturalists, wildlife photographers who, by the very nature of their work, the environment they work they are also suffer due to scorpion sting incidences, hence necessary awareness to be created among general public and students regarding proper identification of scorpions, precautions against scorpion sting.

K. Rajkumar, IFS, District Forest Officer, Nilgiris South Forest Division who presided over the function, said that human scorpion conflict is an age old phenomenon but there is a need for a change in this mindset now. Stressing the importance of such a workshop, he said that scorpion sting is a major health hazard that leads to high mortality especially in rural India. He said

that all sections of the society should know how to handle scorpion sting incidences and spoke about the ecological role of scorpions to our ecosystem.

R. Sanil Associate Professor, Department of Zoology & Wildlife Biology said to the audience to demolish the myths and superstitions connected with scorpion sting treatment procedures.

### Technical Sessions

Technical sessions about scorpions external characters and anatomical features, scorpions distribution pattern, identification of venomous scorpions, first aid and clinical treatment for scorpion sting were taught by J. Ebasar, Head of Department, Dept of Zoology & Wildlife Biology, and by P. Kannan, Assistant Professor and Tolstoy, MD, PSG Hospital, Coimbatore mentioned that, scorpion sting is an acute life threatening medical emergency. Scorpion will not always inject venom when it stings. It can control its ejaculation with each sting which is usually 0.1 to 0.66 mg. Scorpion venom may contain multiple toxins and other compounds. The venom is composed of varying concentrations of neurotoxins, cardiotoxins, nephrotoxins, hemolytic toxins, phosphodiesterases, phospholipases, hyaluronidases, glycosaminoglycans, histamins, serotonin, tryptophan and cytokine releasers. He also spoke about clinical manifestation, medical care, local treatment and medical care systemic treatment and by giving Prazosin,



**A section of participants of the workshop on Scorpions**

a competitive post synaptic alpha1, adreno-receptor antagonists should be the first line of treatment. Prazosin is available as scored 1mg tablet. Sustained release tablets are not recommended in this condition. The dose recommended is 30 microgram/kg/dose. This is given as an immediate measure in all with evidence of autonomic storm. It should not be given as prophylaxis. Intropes and diuretics may be required. Blood pressure, pulse rate and respiration must be monitored every 30 minutes for 3 hours, every hour for next 6 hours and later every 4 hours till improvement. Prazosin should be repeated in the same dose at the end of 3 hours according to clinical response and later every 6 hours till extremities are warm, dry and peripheral veins are visible easily. Scorpion antivenom is the treatment of choice after stabilization and supportive care. Scorpion antivenom must be administered, without skin test, as early as possible and through venous route. Because of the heterogeneity of venom composition between different scorpion species, one species antivenom will have limited effect on another's venom. Usefulness of scorpion antivenom varies between countries.

Some of the preventive measures are

1. protective clothing, such as shoes or gloves, may prevent some scorpion envenomations.
2. check shoes, glove, clothing, and backpacks for scorpions prior to use.
3. keep yards free of debris, which can serve as a place for scorpions to hide.
4. make sure windows and doors fit tightly to prevent scorpion entering the house from outside
5. avoid walking barefoot, especially at night when scorpions are active mostly at night.

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