1. The most frequently seen scorpion species in Tamil Nadu are Buthus Tamulus (red) and Palamneus Gravimanus (black). The toxic effects of the venom varies with the species. The venom of Buthus is much more toxic than that of Palamneus. The younger the species the less serious are the toxic effects.

2. The minimum lethal dose of the venom of Buthus Tamulus and that of Palamneus Gravimanus are 3.2 mg per kg body weight and 4.0 mg per kg body weight respectively in dogs. In cats, the minimum lethal dose for Buthus Tamulus is 4.4 mg per kg body weight. In rabbits the minimum lethal dose for Buthus Tamulus is 3.3 mg per kg body weight. The LD$_{50}$ of Buthus and Palamneus as worked out by Reed-Muench method is 2.65 mg per kg and 3.9 mg per kg body weight respectively in dogs.

3. Different species of animals exhibit varying degrees of response on venom administration. Dog is the most sensitive animals, less so the rabbit, cat and white rat. The frogs seem to be more resistant to the toxic effects of the venom.
4. Polyacrylamide gel electrophoretic pattern for the venoms of Buthus Tamulus and Palameus Gravimanus show five and four protein bands (globulins) respectively. They are slow moving proteins probably cathodic and have high molecular weight. There are characteristic differences in their pattern on comparison.

5. The venom of both the species when given intravenously produce certain toxic manifestations depending upon the dose. Cardiovascular manifestations are the most serious toxic effects encountered in experimental animals.

6. Hypotension is the most common observation in the present study in contrast to the reports of hypertension observed by other authors with the venom of other species. This observation highlights the variability of the venom effects in respect of the different species of scorpions.

7. Serum enzymes like LDH, SGOT and SGPT are significantly raised following the administration of the venom in experimental animals suggesting the possibility of direct effects of the venom on the myocardium. This observation is again at variance with the published reports. Significant rise in serum amylase suggest the toxic effect of venom on pancreas. Pancreatitis is one of the complications not to be missed.
8. Important ECG changes are ST segment depression, T wave inversion, shortened PR interval. These changes are transient in nature, suggesting that toxic myocarditis is a reversible phenomena. Serum electrolyte studies have shown no significant changes in potassium values, thereby ruling out the possibility of electrolyte imbalance inducing ECG changes. Autopsy studies have not revealed any significant damage to the brain tissue. Respiratory changes were often milder in nature and pulmonary hemorrhage or edema was rarely observed in autopsy specimens.

9. Hematological abnormalities and coagulation disorders are not seen with the venom obtained from the species seen in Tamil Nadu. Autopsy has not revealed any evidence of massive haemorrhage either in lungs or the brain, thereby confirming the species variability in different regions.

10. The effect of the venom on the skeletal muscle appears to be that of increasing excitability, contractility and delaying of the onset of fatigue. A muscle treated with the venom of Buthus Tamulus exhibits greater force of contraction when compared with that of the venom of Palamneus Gravimamus; curarised muscle when treated with the venoms of Buthus Tamulus and Palamneus Gravimamus exhibits greater contractility.
11. On plain muscle the venom induces tonic contractions, whose amplitude is dose dependant. Pretreatment with atropine annuls the action of the venom thereby showing that the action is mediated through the parasympathetics.

12. The observation on experimental animals are well corroborated in human beings by clinical reports. Even though there is no specific antivenin to counteract the toxic effects of the venom, symptomatic treatment plays a very important role in the management of hypotension.

13. Hypotension can be corrected with the infusion of lytic cocktail mixture containing chlorpromazine, promezathine and pethidine. Addition of atropine seems to be beneficial in the presence of bradycardia and propranolol is quite useful in restoring normal rhythm if there is persistent tachycardia.

14. Death of the animal is usually due to hypotension followed by respiratory arrest.