A-25 **ELECTRON MICROSCOPIC STUDY OF THE PATHOLOGICAL LESIONS PRODUCED BY VIPER VENOM IN EXPERIMENTAL ANIMALS**

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The pathological features of Green pit viper—G. P. V. (*Trimerusurus trigonocephalus*) venom and Gaboon viper—G. V. (*Bitis gabonica*) venom on experimental animals have been scarcely reported in the literature. However, the changes in the kidney or rat by G. P. V. venom and the effect of G. V. venom on skeletal muscle have been reported. This study was undertaken to observe the pathological changes in a large number of organs in the rat.

Rats (Sprague-Darley) (100-120 g) were injected with G.P.V. venom or G.V. venom through the tail vein. Animals were sacrificed 24-48 hours after injection of venom and tissues were fixed by perfusion with 2.5% Glutaraldehyde in 0.1 M pO_4 buffer. Kidney, lung, heart, cerebral cortex, cerebellum, mid brain, sciatic nerve and diaphragm were processed for electron microscopy.

G.P.V. venom show pathological changes mainly in the lungs, in the liver and in the brain. Lungs show cavuolation and disappearance of the lamellated bodies in secretary cells. Haemorrhage into alveolar sacsis was also observed. In the liver vacuolation is seen in the parenchyma cells with dilation of endoplasmic reticulum and an increase of peribilliary dense bodies. In the mid brain, in the cerebral cortex and in the cerebellum, swelling and disruption of mitochondria are evident. Occasional myelin splitting and separation of axolemma are also observed.

The G.V. venom shows pathological changes mainly in the kidney, in the lungs, in the liver and in the brain. Kidney shows fibrin shreds intermingled with erythrocytes and platelets in glomerular capillaries. There is evidence of interstitial oedema and disorganization of interstitial connective tissue. Lungs show, increase in number of mast cells with electron dense granules and also the disappearance and vacuolation of the lamellated bodies in the secretary cells. Liver shows vacuolation of the parenchyma cells. In the mid brain there is evidence of myelin splitting in addition to swelling and disruption of mitochondria.

These observations suggest that the G.V. venom causes disseminated intravascular coagulation and the G.P.V. venom probably causes liberation of histamine from the secretary cells of the lung.