A - 22

HISTOPATHOLOGICAL STUDY OF THE DISSEMINATED INTRAVASCULAR COAGULATION (D.I.C.) CAUSED BY THE SAW-SCALED OR CARPET VIPER *(ECHIS CARINATUS)* IN EXPERIMENTAL ANIMALS

P. Gopalakrishnakone[1], H. A. Reid[2] *and* **R. D. G. Theakston[2]**
([1]*Department of Anatomy, Faculty of Medicine, University of Peradeniya* ; [2]*W. H. O.*)

Echis carinatus (saw scaled or carpet viper) has a wide distribution extending from Africa, Middle East, Pakistan, India to Sri Lanka. Envenomation by *Echis carinatus* cause local swelling at the site of bite, local necrosis and blistering, non-clotting blood and spontaneous systemic bleeding. A morphological study using light and electron microscope was undertaken to elucidate the pathogenesis of D. I. C. caused by *Echis* venom in rats. Rats were injected with *Echis* venom by intravenous and sub-cutaneous routes, dose of the venom ranged from 1/5 LD_{50} -5 LD_{50}. This venom produced D. I. C. by prothrombin activation. The pathological picture varied with the amount of venom injected, the route of injection and the time of examination after injection of venom.

In light microscopic examination, Lungs showed fibrin clots in the arterioles, venules and capillaries. Areas of haemorrhage into the alveolar sac were also seen. Kidney showed fibrin in the glomerular and interstitial capillaries. Haemorrhages in the cortical and medullary region were also observed. Liver showed congestion.

In electron microscopic examination the fibrin clots seen in the capillaries of the lung and kidney consisted of fibrin strands, aggregated platelets and erythrocytes. The appearance of fibrin varied from strands, to shreds to granules. There was an increase in fibrin deposition in glomerular capillaries and inter tubular capillaries ; tubular necrosis was seen in animals that survived for more than few hours.