

Poster Abstracts

PO-49

HISTOPATHOLOGICAL FEATURES OF CHRONIC WOUNDS OF SNAKE BITE AETIOLOGY.

D.A. Dissanayake^{1,3}, C.S.P.Sosai², M.G.L.Weerawardane³, R.P.V.J. Rajapakse¹, S.A.M. Kularatne⁴, S.K.Wijesekera⁵.

¹Department of Veterinary Pathobiology, Faculty of Veterinary Medicine and Animal Science, University of Peradeniya, Peradeniya, Sri Lanka, ² Department of Pathology, District General Hospital, Gampaha, Sri Lanka, ³Department of Surgery, District General Hospital, Gampaha, Sri Lanka, ⁴Department of Medicine, Faculty of Medicine, University of Peradeniya, Peradeniya, Sri Lanka, ⁵Department of Zoology, Faculty of Natural Sciences, Open University, Kandy, Sri Lanka.

Introduction: A wound is a disruption of the cellular and anatomic continuity of intact tissue which may occur due to physical, chemical, thermal, microbial, or immunological tissue trauma. The chronic wounds that develop following snake bites may display a spectrum of histological features that could be correlated with the type of venom injected. Literature regarding chronic wounds following snake bites, pathological aspects related to clinical manifestation in Sri Lanka is limited. The pathological changes may be useful in the management of chronic wounds following snake bites.

Objectives: To describe the histopathological changes seen in chronic wounds following *Daboia russelii* (Russell's viper), *Hypnale* species (Hump nosed viper) and *Naja naja* (Cobra) bites.

Methods and materials: Patients with chronic wounds following sustained bites caused by different types of snakes and chronic wounds with non snake aetiology were selected for wound cleaning and if needed histological biopsy. Tissue biopsy from selected chronic wounds from *Daboia russelii*, *Hypnale* and *Naja naja* bites were taken and transferred to 10% buffered formal saline. Tissue fixed in 10% formal saline was processed by routine procedure and stained with haematoxylin and eosin. Tissue sections were assessed for histological features including the superficial oedema, collagen degeneration, haemorrhage, vascular/ endothelial proliferation, types of inflammatory cells, presence or absence of granulation tissues.

Results: Tissue samples taken from chronic wounds following snake bites didn't show, superficial dermal oedema and collagen degeneration was seen in all three types. Inflammatory cells were seen in all types of wounds.

Marked cell infiltration with mixed picture and inflammation around the vessels could be seen. Hemorrhagic areas in hypodermis were seen in tissue sample taken from *Naja naja* and *Hypnale* species bite wounds. Vascular proliferation more in all types of chronic wounds of these snake bites compared to chronic wounds of non snake aetiology. Granulation tissues also more in chronic wounds following snake bites than the wounds of other aetiology.

Discussion: Chronic wounds following snake bites found to have more granulation tissues and vascular proliferations than wounds of other aetiology. More Lymphocytes and Plasma cells were seen wounds following snake bites and more eosinophils detected in with other aetiology than snake bites wounds. Among these three snake bites, more haemorrhages were presented in *Naja naja* and *Hypnale* bite wounds compared to *Daboia russelii*.