

Clinical and histopathological features of patients with cutaneous leishmaniasis in Hambantota, Sri Lanka

Sudarshani K.A.M.^{1*}, Eswaramohan T.², Murugananthan A.³, Wegiriya H.C.E.¹ and Liyanage P.L.A.N.⁴

¹Department of Zoology, Faculty of Science, University of Ruhuna, Matara, Sri Lanka

²Department of Zoology, Faculty of Science, University of Jaffna, Jaffna, Sri Lanka

³Department of Parasitology, Faculty of Medicine, University of Jaffna, Sri Lanka

⁴Tangalle Base Hospital, Tangalle, Sri Lanka

Leishmaniasis is a recently established disease in Sri Lanka, and patients with cutaneous leishmaniasis (CL) have been reported in almost all districts. *Leishmania donovani* has been identified as the causative organism. This research is designed to study the clinical and histopathological features in CL. The study was conducted on CL suspected patients attending the Dermatology clinic in Base Hospital Tangalle from June 2016 to January 2017. After a general clinical examination, characteristic features of the CL lesions were recorded using a structured clinical data sheet. A slit-skin thin smear taken from each patient was stained with Giemsa stain and examined under the light microscope to identify *Leishmania* amastigotes. On the subsequent clinic visit, skin biopsy samples were taken only from the slit-skin smear positive patients. Prepared sections were stained with Haematoxyline/Eosin to observe any histopathological changes. During this study, forty-five (45) skin biopsy samples were collected. Out of four types of lesions, the most common type was nodules. Majority of CL patients had lesions on their upper arms (67.3%). Most of the lesions (57.1%) were wider than 1 mm and lesser than 1 cm in size. Considerable number of lesions was 3 to 6 months old. Dermal changes like mononuclear infiltrate of lymphocytes, macrophages, plasma cells and a few giant cells were seen. In lesions less than 6 months old, large number of L. *Donovani* (LD) bodies could be seen but the LD bodies spread up to deeper layers of the skin when the duration of the lesions increased. The most common epidermal changes of these lesions were hyperkeratosis, parakeratosis and acanthosis. Current findings indicate that the skin biopsy samples can be used for the diagnosis of CL especially the old, ulcerative CL lesions by considering the epidermal and dermal changes in histological sections.

Keywords: Cutaneous leishmaniasis, histopathology, slit-skin smears, skin biopsy

*Corresponding Author: mangalas@zoo.ruh.ac.lk