



DERMATOPATHOLOGY

PREVALENCE AND FACTORS ASSOCIATED WITH PERSISTENT GRANULOMAS AMONG LEPROSY PATIENTS IN A TERTIARY HOSPITAL IN THE PHILIPPINES

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Introduction: Leprosy is a chronic granulomatous infection with *Mycobacterium leprae*. In the recent years, histopathological response to treatment have been investigated. Persistent granulomas noted on histopathologic examination are often used as basis for extension of treatment.

Objective: This research aims to determine the association between treatment outcomes (type 1 and 2 reaction, neuropathy, clinically silent and treatment extension) of leprosy patients seen at a tertiary hospital in the Philippines and persistent granulomas histologically.

Materials and Methods: This was a prospective cohort evaluating the clinical and histopathologic changes of Leprosy patients after one year of treatment. A standard form was used to collect demographic and clinical data. Development of reactional states, neuropathies and other medical conditions throughout the course of treatment and upon completion were noted. The pre-treatment and post-treatment biopsy slides were examined by a dermatopathologist who was blinded about the clinical findings. Grading of granuloma fraction (GF) and identification of infiltrates were done.

Results: A total of 19 males and 6 females were recruited for the study. None of the treatment outcomes were found to be significantly associated with persistent granulomas (Fisher exact test $p=0.593$). Persistent granulomas were not significantly associated with Fite staining (Fisher exact test $p=1$) but these were significantly associated with the change of infiltrates from foamy histiocytes to epithelioid or few lymphocytes (Fisher exact test $p=0.0166$). The means of the post-treatment GF were significantly different between those with and without persistent granulomas (independent samples t-test $t=3.432$, $p=0.002$).

Conclusions: A high proportion of patients who complete treatment for leprosy have persistent granulomas histologically. Because of this, there is injudicious treatment





extension. This study recommends characterization of infiltrates, quantification of GF reduction and correlation with clinical parameters and bacillary indices rather than relying on the presence of persistent granulomas alone when deciding treatment extension or cessation.

