

USE OF rK39 FOR DIAGNOSIS OF POST KALA-AZAR DERMAL LEISHMANIASIS IN NEPAL

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Abstract. A recently developed nitrocellulose-based dipstick test, rK39, has been widely used for the diagnosis of kala-azar. In this study, we evaluated its use for the diagnosis of post kala-azar dermal leishmaniasis (PKDL). We also investigated the time taken by patients to develop PKDL after apparent cure of kala-azar (visceral leishmaniasis, VL) and the time taken by patients to come to the hospital after the appearance of symptoms of PKDL. A majority of patients developed the disease within three years after the apparent cure of kala-azar (KA). A majority of patients sought treatment within five years after the onset of PKDL. The amastigotes of *Leishmania donovani* bodies (LDBs) were demonstrated in 70, 20, and 20% of slit-skin smears (SSS) prepared, respectively, from nodular, papular, and macular forms. The presence of highest density (6+) LDBs in the SSS of 20% of nodular PKDL patients indicated that they may have acted as reservoir in the community. Other reservoirs are not known in Nepal. Only 8% cases were detected by aldehyde test. Although this test is obsolete it is still used in rural parts of Nepal. The dipstick (rK39) was 96% sensitive and 100% specific to diagnose PKDL. Its positive predictive value, negative predictive value, and diagnostic efficacy were 100, 91, and 97% respectively. Due to the advantage of cost compared with the direct agglutination test (DAT), and being easy to use and store in field conditions, rK39 is a good tool to diagnose PKDL in rural situations. All the PKDL patients were cured of the disease after treatment by SAG.

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