Active versus passive case detection for control of visceral leishmaniasis in Bangladesh


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Background

Bangladesh aims to eliminate visceral leishmaniasis (VL) by 2015. Diagnosis of VL and post kala-azar dermal leishmaniasis (PKDL) in Bangladesh has traditionally been based on passive case detection (PCD), which is subject to underreporting. Although studies have shown active case detection (ACD) to be more effective than PCD in detecting VL and PKDL, ACD has not been tested under regular programme settings.

Project

Since April 2010, MSF has used ACD and provided free treatment with liposomal amphotericin B to control VL and PKDL in Fulbaria, a sub-district, of Mymenshingh, Bangladesh. Households within 200 meters of an index case are screened by trained outreach workers, who provide education on leishmaniasis and perform serology-based rK39 tests on clinically suspected cases. Patients who are rK39-positive are referred to the MSF clinic for confirmatory diagnosis and treatment by a physician. This study met the MSF Ethics Review Board criteria for analysis of routinely collected programme data. Permission was obtained from the Director of Communicable Disease Control, Ministry of Health, Dhaka, Bangladesh.

Results

Between April 2010 and December 2011, outreach workers screened a total of 1858 clusters (37160 households) in Fulbaria. 68% of clusters (1264) were visited three or more times to ensure that no cases were missed due to the often extensive latency period (up to 8 months) between initial exposure and clinically evident disease. Of the 1425 VL and 1279 PKDL cases that MSF treated during the study period, 1087 VL and 1145 PKDL cases were detected by ACD. By comparison, just 756 VL and 37 PKDL cases were diagnosed by PCD in the neighbouring subdistrict of Trishal, which has a similar case load of VL, access to healthcare and socio-
economic status. Except for MSF care, treatment for VL and PKDL is available only in the public sector.

Conclusions

An ACD strategy using outreach workers and a symptom/sign-based approach coupled with provision of the rK39 test at the community level results in an increased yield of VL and a considerably higher yield of PKDL compared to PCD. Our study was limited by the potential crossover of patients from one subdistrict to another as well as by different treatment regimens and inferior record keeping in areas with PCD.