

A dot-blot ELISA comparable to immunoblot for the specific diagnosis of human parastrongyliasis

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A dot-blot ELISA comparable to immunoblot for the specific diagnosis of human parastrongyliasis

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Abstract

A dot-blot enzyme-linked immunosorbent assay (dot-blot ELISA) using an electroeluted 31-kDa glycoprotein from adult worms of *Parastrongylus cantonensis* as the specific antigen was evaluated for the immunological diagnosis of patients infected with *P. cantonensis*. The sensitivity and specificity for the detection of serum antibody to *P. cantonensis* in dot-blot ELISA were both 100%, as determined with serum samples of ten *P. cantonensis*-infected patients, 60 patients with other related parasitic infections, and 20 uninfected controls. The test was as sensitive and specific as the immunoblot test which revealed a reactive band of 31 kDa. Both the dot-blot ELISA and immunoblot detected all sera from ten *P. cantonensis*-infected individuals, but not with those of other heterologous parasitoses (gnathostomiasis, toxocariasis, filariasis, paragonimiasis, cysticercosis and malaria) or sera from healthy controls. The dot-blot ELISA is much simpler to perform than the immunoblot technique, and the test can be applied under field conditions where sophisticated facilities are lacking.

Reference

Gandhi, B.M. (1986) A dot immunobinding assay (DIA) on nitrocellulose membrane for the serological detection of antibodies to *Entamoeba histolytica*. *Transactions of the Royal Society of Tropical Medicine and Hygiene* **80**, 883–885.