Prevalence of toxoplasmosis in immunocompromised cancer patients attending a tertiary care hospital

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Introduction

Toxoplasmosis is caused by the intracellular parasite *Toxoplasma gondii.* Acute toxoplasmosis in an otherwise healthy person is often asymptomatic. However, in immunocompromised hosts toxoplasmosis can be life threatening. The reported seroprevalences of toxoplasmosis in Sri Lanka are mostly based on studies conducted on pregnant mothers.

Objectives

To assess the prevalence of toxoplasmosis among immunocompromised cancer patients

Methods

108 patients attending the Out Patients' Department of the National Cancer Institute were recruited following informed written consent. All had a confirmed diagnosis of malignancy and had undergone at least one dose of radiotherapy or chemotherapy. Five milliliters of venous blood was collected from each patient. PCR was performed to detect a 193bp non variable region of B1 gene of *T. gondii*. Direct Agglutination Test was performed to detect anti toxoplasma IgG antibodies.

Results

The ages of the patients ranged from 19 to 83 years. The overall prevalence of toxoplasmosis was 11.1%. *T. gondii* DNA was detected in two patients. Ten were positive for anti toxoplasma IgG antibodies. The highest titre was 1/400. None of those positive by PCR showed seropositivity. Those patients positive by PCR had received both chemotherapy and radiotherapy. Testing positive for toxoplasmosis was not associated with any of the treatment methods.

Conclusions

This study confirms the presence of undetected toxoplasmosis in immunocompromised patients. A case control study based on a more representative patient population would verify the true magnitude of this infection. Regular screening by PCR would help in early detection of infection in those with impaired immunity.

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