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The presence of strongyloidiasis and associated risk factors in patients undergoing treatment at the National Cancer Institute, Maharagama, Sri Lanka

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Introduction

Strongyloides stercoralis can cause severe disease in the immunocompromised. Without a proper gold-standard diagnostic technique, strongyloidiasis is scarcely studied both globally and locally.

Objectives

We aimed to estimate the prevalence of strongyloidiasis among immunocompromised adult patients and to identify risk factors.

Methods

This study was carried out between February to October 2022. A faecal sample and 2 ml of venous blood were collected from consented patients. Direct faecal smear, agar plate, Harada-Mori and Charcoal cultures were performed on the faecal samples. Qualitative Polymerase Chain Reaction (PCR) was performed on selected faecal samples using *S. stercoralis* targeting ITS1 region. Strongyloides IgG ELISA was carried out on the serum samples using DRG Strongyloides IgG ELISA kit.

Results

Collectively, 144 patients (males = 68, females = 76) provided blood/faecal sample or both. Relevant to strongyloidiasis-associated symptoms, some patients had diarrhoea (n=12) and eosinophilia (n=11). Some of them (n=74) had occupational or recreational exposure to soil as potential risk factors. Overall, 24 patients were positive for strongyloidiasis from one or more diagnostic method (5 PCR and 19 ELISA). There were zero culture or direct smear positives. There was no significant association between disease positivity with either of the clinical features or risk factors.

Conclusion

The prevalence of strongyloidiasis in patients with malignancies was 16.66%. Strongyloidiasis is existent in the immunocompromised in Sri Lanka even in the absence of suggestive clinical features or regular exposure to risk factors. Screening immunocompromised patients with sensitive techniques such as PCR for timely diagnosis and treatment is recommended.