Disseminated strongyloidiasis in a 70-year-old lady

Monem Makki Alshok

College of Medicine, University of Babylon, Iraq
Correspondence to Monem Makki Alshok (email: dr_monem_alshok@yahoo.com).
(Submitted: 9 May 2015 – Revised version received: 29 May 2015 – Accepted: 5 June 2015 – Published online: Autumn 2015)

Introduction

*S. stercoralis* is distributed in tropical areas and other hot, humid regions like our country. Globally between 30 and 100 million people are infected with disseminated strongyloidiasis, particularly in patients with unsuspected infection who are given glucocorticoids. Humans acquire strongyloidiasis when filiform larvae in the fecally contaminated soil penetrate the skin or mucous membranes; so sanitation will not prevent infection. The larvae then travel through the bloodstream to the lungs, where they break into the alveolar spaces, ascend the bronchial tree, and are swallowed, thereby reach the small intestine. There the larvae mature into adult worms that penetrate the mucosa of the proximal small bowel. The larva repeats the migration that establishes ongoing internal reinfection. This autoinfection cycle allows strongyloidiasis to persist for decades. Strongyloidiasis can thus persist for decades without further exposure of the host to exogenous infective larvae. In immunocompromised hosts, large numbers of invasive Strongyloide larvae can disseminate widely and can be fatal. We describe a fatal disseminated intestinal strongyloidiasis in a 70-year-old lady.

Case Report

A 70-year-old lady was admitted to Merjan Teaching Hospital on 28th of July 2008 with 2 months history of generalised abdominal pain. Presence of numerous *S. stercoralis* larvae during intestinal mucosal biopsies confirmed the diagnosis of hyperinfection syndrome in this patient. Albendazole therapy did not cure the effects, and the patient died due to this severe illness. The most important clue to prevent such fatal consequences is high index of suspicion, early diagnosis and proper management.

Discussion

Strongyloides is one of the parasitic infections which has the ability to autoinfect the host without soil or intermediate host.
It is often complicated by infections caused by gut flora that gain access to intestinal sites, presumably through ulcers induced by the filariform larvae, as we had noticed in our case report who presented with severe toxic manifestation. Strongyloidiasis can occur without any symptoms or as a potentially fatal hyperinfection or disseminated infection. Immunocompromised patients are at an increased risk of dissemination because impaired cellular and humoral immunity alter parasite proliferation, resulting in increased parasitic burden and possible dissemination to other organs. In this accelerated phase of autoinfection, enormous numbers of larvae are released into the venous circulation and disseminate throughout the body. As we had noticed in our patient not only having AIDS or being treated with corticosteroids and/or other immunosuppressive drugs, but possibly she is an elderly patient with disturbed immune function. The patient presented in this case report lived in an endemic area with warm climate area in Babylon Iraq and her infection with *S. stercoralis* was undiagnosed till her hospitalization. In some cases of hyperinfection and disseminated strongyloidiasis, eosinophilia is the most important laboratory finding in patients infected with *S. stercoralis*, but in our patient eosinophilia is not documented and this might be due to disturbed cellular immune function or possible underlying abuse of non-reported corticosteroid abuse. Treatment with ivermectin resulted in remarkable clinical improvement and reversion of eosinophil count to normal. We treated our patient by using albendazole antihelminthic which is less effective than ivermectin therapy and it was not available at that time. In this reported case, the initial presentation was C/W features of malabsorption and possible septicemia and the ultimate were made after tissue diagnosis and in strongyloidiasis diagnosis it is important as the infection may persist for decades and immunosuppressed patients with chronic strongyloidiasis are at high risk of developing strongyloides hyperinfection syndrome, a fatal life-threatening complication whereby larval proliferation leads to systemic sepsis and multiorgan failure. If strongyloidiasis is diagnosed early, however, it is easily treatable with oral anthelmintic drugs. Therefore, as clinical symptoms and endoscopic findings are non-specific, a high level of suspicion is required for diagnosis especially in patients who present with a vague clinical presentation. In conclusion, we should know that individuals with disturbed immunity, particularly with cell-mediated immunity defect, hematological malignancy, steroid usage, malnutrition, diabetes and organ transplantation, in addition to elderly subjects are predisposed to this infection. Early diagnosis and timely therapy in case of hyperinfection syndrome can have a marked impact on the disease outcome. Also endoscopic findings of GIT could be non-specific, a high level of suspicion is required for diagnosis.

![Histopathological and some clinical signs.](image)

**Fig. 1** a-f: Histopathological and some clinical signs.
References