Case report

Dyspeptic disorders and eosinophilia due to ancylostomiasis: a case report

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Abstract

We present the case of a 41-year old man who consulted for dyspeptic disorders and presented with eosinophilia after a trip to Senegal. The diagnosis of ancylostomiasis was made by a parasitological stool examination. The treatment by fluoromebendazole was successful.

Keywords: Ancylostomiasis; Dyspeptic disorders; Eosinophilia; Senegal

CASE REPORT

Mr. S. T. is a 41-year-old father of three children coming to consultation for "Dyspeptic Disorders". He does not have any significant family history. In his past medical history a tuberculosis(TB) primary infection was successfully treated and he underwent an amygdalectomy at age 10.

The history of his disease started one week earlier and he self-medicated his heartburn with Maalox (magnesium and aluminum hydroxide) without substantial improvement of his symptoms.

The patient mentioned a trip to Senegal two months before and remembered walking in flip-flops in particular on pond shores where he photographed children playing in the water. He recalled the itchiness of his feet soon afterwards. However, he had not experienced any respiratory or Ear-nose-teeth (E. N. T.) symptoms at any time. His dyspeptic troubles included: pyrosis, nausea and vomiting.

The clinical exam showed an epigastric area sensitive to palpation. The biological check-up revealed an eosinophilia [19% of 5 900 white blood cell(WBC)] and the parasitological stool exam exhibited some eggs of *Necator americanus*(*N. americanus*). Consequently, the diagnosis of ancylostomiasis was established and a treatment by fluoromebendazole was prescribed (1 tab twice a day for 3 days).

Hematological and parasitological controls performed 6 weeks later were normal.

DISCUSSION

Ancylostomiasis is endemic throughout the inter-tropical zone and due to *Ancylostoma duodenale* (*A. duodenale*) or Necator americanus. As anecdote, at the turn of the 20th century, it used to be present in some French coal mines from which it has been eradicated[1].

Transmission occurs transcutaneously by the penetration of strongyloid larvae mostly at the feet level. The larvae undergo a complex cycle before becoming adult worms residing in the duodenum and jejunum[2].

Cutaneous symptoms are made of erythematous and pruriginous papules that can only be seen after initial or pauci-infestations[3]. Simultaneously with cutaneous symptoms, respiratory and E. N. T. manifestations may be observed as follows: productive cough and dysphonia[4]. Dyspeptic symptoms are due

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to the duodenitis, which appears about 30 days after contamination. They last 1 to 2 months[5]. The main complication of ancylostomiasis is anemia. However, it only affects young children and pregnant women. It is hypochromic and microcytic. *A. duodenale* draws 10 times more blood than *N. americanus* (0.2 vs. 0.02mL/day)[6], hence the importance of differentiating the species. Moreover, *A. duodenale* lives 4 to 5 years whereas *N. americanus* lives 10 to 15 years. Eggs are difficult to distinguish if stools are not examined right after defecation. Stool culture (on charcoal, for example) will produce the larvae, which are easier to identify. Anemia provokes paleness, dyspnea on exertion, tachycardia, cardiomegaly with an ejection murmur, hypotension, hepatomegaly and sub-cutaneous edema[7]. In young children, it can stunt mental and physical growth and even lead to death by anasarca[8-11]. The parasitological stool exam becomes positive at least 45 days post contamination.

Eosinophilia is frequent at the early stages of the disease and follows the Lavier's curve[12]. Therefore, it reaches its peak during the migratory larval stage[13]. Rarely, at the beginning of the adult phase a residual eosinophilia subsists which may lead to suspect strongyloidiasis erroneously.

Fluoromebendazole, mebendazole or albendazole are the mainstay of the ancylostomiasis treatment. Pyrantel pamoate can also be used. Albendazole requires a single intake (400mg)[14].

Prevention relies upon:

- Collectively: (a) Mass treatment and fecal hygiene with the construction of latrines, (b) Not using human feces as fertilizers and (c) Sanitary education

- Individually: Wearing closed shoes or not walking in the mud[15].

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