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Katayama syndrome in patients with schistosomiasis

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To the editor,

I read with great interest the recent article by Erko *et al*[1]. Interestingly, one facet of schistosomal infection that is often overlooked is Katayama syndrome (KS).

The constellation of symptoms seen in KS is secondary to eosinophil mediated systemic vasculitis. Small vessel thrombosis may accompany the vasculitis. This eosinophilic response is triggered by the migrating schistosomula[2]. KS overall represents a hyper-sensitivity response. Symptoms and signs usually appear within six weeks of onset of the schistosomal infection. Symptoms have been reported as much as 12 weeks following initial infestation. A history of contact with water bodies can be elicited in most patients with KS. In rare cases, the symptoms may appear as early as three weeks after initial exposure. KS may rarely occur in outbreaks as recently report by Zuidema[3]. Similar mini-epidemics have been reported by Loutan *et al*[4].

Disease onset is usually acute. Nocturnal fever is a characteristic of the syndrome and is seen in 60% of the patients[5]. Patients may also complain of sputum free cough and significant malaise. Vomiting and diarrhea are also usually present. Urticaria may be present at the same time. Physical examination may reveal marked abdominal tenderness as well as hepatic enlargement. In general, symptoms and signs involving the respiratory tract tend to occur in the initial phase of the syndrome while abdominal signs and symptoms tend to occur much later during the course of the syndrome. Neurological manifestations are typically seen during the early phase of KS[6]. The most common neurological syndrome that is encountered is transverse myelitis.

Anti-schistosomal antibodies are usually positive in KS and help in making an early diagnosis of the syndrome. Serological tests have an overall sensitivity of 95.5% in detecting schistosomiasis[7]. Egg detection is also another way of confirming the diagnosis. Peripheral blood examination reveals significant eosinophilia in 91% of the patients. Eosinophilic counts as high as 3080 cells/mm^3 have been reported[8]. Chest X rays may reveal diffuse infiltrates within the lung fields. Rocha *et al.* have also reported micro-nodules in the inferior lung fields in patients with KS. These nodules usually have a beaded appearance.

Praziquantel should be initiated immediately during the acute phase of KS. A daily dose of 40 mg/kg needs to be administered for at least three days. Xiao *et al.* have recently reported success with artemether also[9]. Oxamniquine is another emerging alternative that has shown considerable promise. Concurrent steroid therapy is in general recommended for the management of KS. Most patients become asymptomatic after a mean period of 4.8 d[3]. The constellation of symptoms encompassing KS may recur despite adequate initial treatment in 22% of the patients[6].

Early initiation of adequate therapy greatly mitigates the progression of KS. KS should be especially watched for in tourists returning from areas endemic for schistosomiasis.

Conflict of interest statement

We declare that we have no conflict of interest.

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