Case Reports

Visceral larva migrans with cardiac involvement

S K Lokuarachchi[1], S K Pathirana[1], S P Gunasekara[2] , S S Tennekone[3]

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Introduction

Toxocara canis, a nematode round worm of the family Ascaridia, is a parasite causing infection in tropical and temperate regions of the world[1]. The common cause of visceral larva migrans and ocular toxocariasis is *Toxocara canis*. Humans do not act as a definite host but the larvae may migrate throughout the tissues and may activate an eosinophilic inflammatory reaction in various parts of the body[1,2]. We report a case of visceral larva migrans with myocardial involvement.

Case report

A 6½ year old girl, the only child of non consanguineous healthy parents, presented with on and off fever of 2 weeks duration. Apart from mild chest pain and cough she did not have any other complaints. A few days prior to presentation she had an erythematous macular rash over the face and upper limbs which disappeared gradually over 5-6 days. There was no history of significant illnesses. There were pet dogs at home and one recently had three puppies. Clinical examination revealed an irregular pulse with no other abnormality in the cardiovascular system. There was significant lymphadenopathy with mild hepatomegaly. ECG showed ventricular bigemini. 2D Echocardiogram was normal. Full blood count and blood picture revealed leucocytosis with eosinophilia. Ultrasound scan of abdomen, chest x-ray and bone marrow were done to exclude possible lymphoma. These investigations revealed no abnormality except a marked eosinophilic response in the bone marrow. A presumptive clinical diagnosis of toxocara infection with myocarditis was made.

Test for toxocara antibodies was highly positive. Opthalmological evaluation by ophthalmologist excluded eye involvement. She was treated with DEC (diethylcarbamazine). Corticosteroids were added to the treatment regimen because of cardiac involvement. Following this treatment she became afebrile, lymphadenopathy disappeared, and ECG showed normal rhythm. Eosinophilia in full blood count disappeared.

[1]*Consultant Paediatrician,* [2]*Senior Registrar in Paediatrics,* [3]*Registrar in Paediatrics, Teaching Hospital, Karapitiya*

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Discussion

Nearly all human toxocara infections occur by ingestion of infective eggs of *toxocara canis* from soil or ingestion of uncooked organs and muscle meat from paratenic hosts such as pigs, lamb, rabbits, chicken and cows[1]. Pica is the principal risk factor for visceral larva migrans in children. Ingested eggs hatch in the stomach and larvae enter into the portal circulation and subsequently to the systemic circulation. They enter into the visceral organs and muscle[1, 2].

Migrating larvae may cause tissue damage; dead or dying larvae provoke intensive inflammatory response. Involvement of liver, myocardium, brain, pancreas, skin, kidney, intestine and regional lymph nodes has been reported[1]. Eye infection is an important complication of *toxocara canis* infection.

Infected persons have fever, lymphadenopathy, hepatomegaly, cough, wheezing, urticarial rash and weight loss. Myocardial involvement is rare but has been reported in several fatal cases and is an incidental finding at the time of open heart surgery in some patients[1].

The overall prognosis of visceral larva migrans is excellent. In severe cases removal of the patient from the source of exposure is important. Pharmacological treatment for visceral larva migrans should be considered when severe symptoms occur or when involvement of vital organs are suspected[1,2]. Treatment with albendazole, mebendazole or diethylcarbamazine is effective in visceral larva migrans. When vital organs such as brain and myocardium are affected, the use of corticosteroids may be indicated in addition to anthelmintic therapy[1,2].

Reference:

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