A PRESumptive CASE OF TOXOCARIasis ASSOCIATED WITH eosINOPHILIC PleuRAL EFFUSSION: CASE REPORT AND LITERATURE REVIEW

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Abstract. Human toxocariasis is a helminthozoonosis caused by Toxocara sp. Larval migration of the organism through the tissues can result in eosinophilia associated with a broad spectrum of clinical manifestations. We report a case of eosinophilic pleural effusion and CD8 cell deficiency associated with Toxocara sp. The symptoms of this patient responded promptly to a nonsteroidal anti-inflammatory medication (naproxen). This is only the fourth reported case of a pleural effusion associated with Toxocara.

Human toxocariasis is a helminthozoonosis due to migration of Toxocara species larvae through the human body causing visceral larva migrans.1,2 We report a patient with an eosinophilic pleural effusion and a CD8 cell deficiency associated with Toxocara infection whose symptoms responded to naproxen.

A 54-year-old man with a history of night sweats for one year presented with complaints of left-sided pleuritic chest pain, worsening shortness of breath, orthostatic symptoms, sleepiness, and fatigue for five weeks. He had 31 pit bulls that he used as hunting hogs and reported a history of not washing his hands after handling the dogs. On examination, he had decreased breath sounds in the posterior left base. Roentgenographic studies showed a left pleural effusion. Thoracentesis showed 900 mL of yellow cloudy fluid with 29,000 white blood cells (WBCs)/mm3, 36% neutrophils, 43% eosinophils, a lactate dehydrogenase level of 617 units/liter, and a protein level of 4.1 g/dL. The results of bacterial, fungal, and acid-fast bacilli stains, cultures, and cytologic analysis were negative. Over the next two days, the patient experienced fever (103°F [39.4°C]), chills, worsening of chest pain, and shortness of breath. Re-evaluation showed a large and loculated pleural effusion. He was then admitted to the Medical Center of Central Georgia Hospital in Macon, Georgia.

Laboratory evaluation showed a WBC count of 8,550/mm3 with 21% eosinophils. The level of C-reactive protein was increased (34.5 mg/dL) (normal range = 0.020-0.722 mg/dL), as was the erythrocyte sedimentation rate (119 mm/hour) (normal range = 0-20 mm/hour), and a cellular immunodeficiency test showed an absolute CD8 cell count of 163/μL (normal range = 315-788/μL). The effusion was drained with chest tubes. It contained 18,360 RBCs/mm3 and 15,720 WBCs/mm3 with 82% neutrophils, 8% eosinophils, 7% lymphocytes, and 3% monocytes with negative stain and culture results. He continued to have a fever after treatment with ticarcillin clavulenate (3.1 grams every six hours) and became acutely responding to a nonsteroidal anti-inflammatory drug. This is only the fourth reported case of a pleural effusion associated with Toxocara.

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