CASE REPORT: ACQUIRED PROGRESSIVE MUSCULAR HYPERTROPHY AND TRICHINOSIS

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Abstract. We present the case of a 49-year-old man with progressive generalized muscle hypertrophy and weakness for 3 months. Laboratory results revealed peripheral blood eosinophilia and significant elevation of creatinine kinase level. Histologic findings from muscle biopsy demonstrated a nurse cell-larva complex. Treatment with albendazole resulted in a very favorable outcome.

INTRODUCTION

Trichinosis or trichinellosis is caused by species of the intestinal nematode Trichinella. Most human infections with Trichinella are attributed to Trichinella spiralis. The cardinal features of trichinosis are gastrointestinal signs, high fever, myalgia, palpebral and facial edema, and marked eosinophilia. We report a case of trichinosis with progressive generalized muscle hypertrophy, which to our knowledge has never been reported.

CASE REPORT

A 49-year-old Thai worker man was admitted to Srinagarind Hospital in January 2004 with the chief complaint of progressive generalized muscular hypertrophy and weakness for 3 months. His body weight was also increased 10 kg. He had been in good health. He worked in Malaysia since 2002 and gave a significant history of having eaten raw wild pig 1 month before this illness. There was no history of fever, watery diarrhea, facial and periorbital edema, generalized pain, and myalgia. On physical examination, he was alert, dysarthria, and afebrile. He had generalized muscular hypertrophy of face, neck, trunk, and all extremities (Figure 1). Muscle weakness was mainly proximal and symmetrical. The muscle power of proximal: distal was grade 4/5:5/5 with generalized hyporeflexia. There was no sensory abnormality, cerebellar ataxia, or impairment of cranial nerves or autonomic nervous system.

The peripheral white blood cell count was 14,300 cells/mm³ with 24% eosinophils. Creatine kinase (CK) level was 2,200 U/L (normal range, 25–200 U/L). Electromyography was consistent with myopathy. Quadriceps muscle biopsy was performed. Examination from compression of part of fresh muscle biopsy between glass slides revealed larvae of Trichinella species (Figure 2). A nurse cell-larva complex was observed from histologic study (Figure 3). Trichinosis was diagnosed. The patient was treated with albendazole 1,200 mg/day in two divided doses for 4 weeks. During treatment, fever was occurred, while septic work up was negative. His conditions gradually improved. On follow-up 3 months later, muscle power returned to normal function and muscular hypertrophy disappeared. Per cent of eosinophils and CK level were reduced to normal ranges.

Trichinosis is caused by ingestion of insufficiently cooked meat contaminated with infective larvae of nematodes belonging to the genus Trichinella. Recently, seven species are found to infect humans and divide into two groups: encapsulated larvae (Trichinella spiralis, Trichinella britovi, Trichinella nativa, Trichinella nelsoni, and Trichinella murrelli) and nonencapsulated larvae (Trichinella pseudospiralis and Trichinella papuae).1 The differentiation of two groups is that encapsulated species develop in skeletal muscle with inducing a nurse cell, while the other do not induce a nurse cell.2 From the epidemiologic study in the Southeast Asia, T. spiralis have been detected in sylvatic and domestic animals and in humans.3 Unfortunately, we do not have any facility on characterized the genotype of the organism, however on the basis of the aforementioned characteristics, T. spiralis was most likely the causative agent in our patient. The cardinal features of

FIGURE 1. Generalized muscular hypertrophy.
Trichinosis are gastrointestinal signs, high fever, myalgia, palpebral and facial edema, and marked eosinophilia (which are not found in our case, except eosinophilia). Weakness is also a consequence of the muscle involvement. The muscles become edematous, which lasts 1 or 2 weeks and disappears. In this current study, the patient developed prolonged progressive muscular hypertrophy and weakness, which to our knowledge has never been reported. The antihelmintic drugs used for trichinosis are thiabendazole, mebendazole, and albendazole. Albendazole is well absorbed and tolerated and possibly more effective.

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