Neglected parasitic infection: toxocariasis

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DESCRIPTION

A healthy 34-year-old Japanese man presented with a 10-day history of epigastralgia. He had eaten seared chicken sashimi several times. Physical examination findings were not remarkable. Laboratory findings revealed marked eosinophilia (20×10^9/L). Chest CT revealed multiple nodules in the lung surrounded by a halo (figure 1). Abdominal contrast-enhanced CT revealed multiple low-attenuating nodules in the liver (figure 2). An ELISA for *Toxocara* was strongly positive; thus, a diagnosis of toxocariasis was established. After treatment with albendazole, his symptoms and eosinophilia improved, and the pulmonary and liver lesions disappeared.

Toxocariasis is a parasitic disease caused by the larvae of the roundworm *Toxocara canis* or *Toxocara cati*. Toxocariasis occurs in children who accidentally ingest dirt containing *Toxocara* eggs, and in adults who eat undercooked or raw meat from infected animals or organic vegetables contaminated with *Toxocara* eggs.[1] Toxocariasis has been reported in many countries. In the USA, the seroprevalence of *Toxocara* has been reported to be 14%; in Brazil and Indonesia, it has been reported to >40%.[2] However, the proportion of clinical toxocariasis remains unknown.

Toxocariasis has two major forms: visceral and ocular. The symptoms of visceral toxocariasis are non-specific and may include fever, abdominal pain, anorexia, eosinophilia and hepatomegaly. The ocular toxocariasis can cause blindness. Serologic testing is required for diagnosis.[3] The differential diagnosis includes other parasitic infections (such as strongyloidiasis or paragonimiasis), systemic disease with eosinophilia, hypereosinophilic syndrome or eosinophilic granulomatosis with polyangitis. However, clinical history and laboratory tests such as ELISA can rule out these diseases.

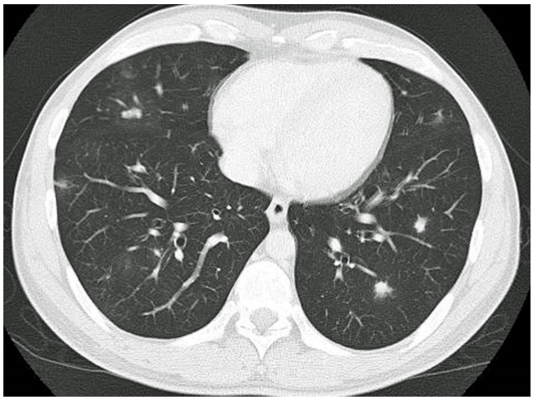

Figure 1 Chest CT image showing multiple nodules surrounded by a halo.

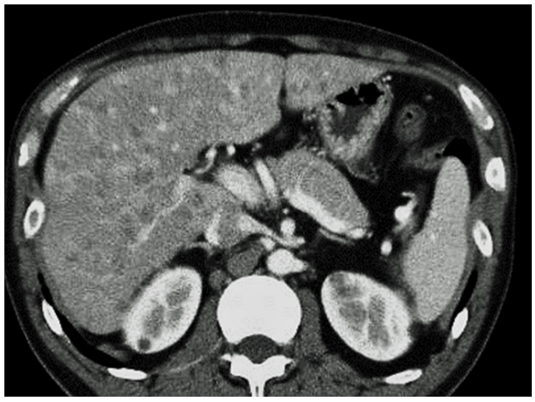

Figure 2 Contrast-enhanced abdominal CT image showing multiple low-attenuation lesions in the liver.

Treatment for toxocariasis includes albendazole for 5 days, but the optimal treatment duration is unclear. Prevention of toxocariasis includes good hygiene practices, immediate disposal of pet faeces and education about the risk of infection due to consumption of raw meat.

Toxocariasis is considered a neglected parasitic infection; however, it is more common than currently believed and can cause severe complications. The condition is treatable and preventable, but remains underdiagnosed and underappreciated.

Learning points

- Toxocariasis should be considered as one of the differential diagnoses of eosinophilia with multiple pulmonary and hepatic lesions.
- Careful enquiry regarding medical history—specifically consumption of undercooked meat—and ELISA are useful for diagnosis.
- Toxocariasis is a treatable and preventable disease.

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