

CASE REPORT

HEPATIC VISCERAL LARVA MIGRANS DUE TO *TOXOCARA CANIS* IN A 72-YEAR-OLD MAN

Ki Dong Ko¹, Jae Joon Lee¹, Kyoung Kon Kim¹, Heuy Sun Suh¹, In Cheol Hwang¹
and Seung Joon Choi²

¹Department of Family Medicine, ²Department of Radiology, Gachon University
Gil Medical Center, Namdong-gu, Incheon, Republic of Korea

Abstract. Hepatic toxocariasis is visceral larva migrans caused by *Toxocara*. We report a case of hepatic toxocariasis detected incidentally during a health checkup. The patient had elevated levels of eosinophils, total IgE, and anti-*Toxocara* IgG antibodies. On contrast-enhanced computed tomography (CT) imaging he had a single, 2.16 cm, oval, ill-defined, low-attenuation hepatic nodule which was best appreciated during the portal venous phase of the scan. Clinicians should consider hepatic toxocariasis as a possible diagnosis in any individual who presents with eosinophilia of unknown etiology and an ill-defined hepatic lesion on CT imaging.

Keywords: toxocariasis, visceral larva migrans

INTRODUCTION

Toxocariasis is an accidental human infection caused by the genus *Toxocara* (Despommier, 2003). Visceral larva migrans (VLM) due to *Toxocara* is defined by the migration of the parasites, mainly through the liver and lungs (Magnaval *et al*, 2001). Reported cases of VLM in the elderly are uncommon but VLM among young children is more commonly reported.

CASE REPORT

A 72-year-old man came to the hos-

pital for a health check. His abdominal ultrasound was abnormal and he had peripheral eosinophilia. The ultrasound showed an oval, hypoechoic, ill-defined, 2 cm nodule in the left lobe of the liver (Fig 1A). His eosinophil count was elevated at 758 cells per μl (12%) and he had no leukocytosis.

The patient complained of no symptoms, except mild fatigue. He had no history of allergic diseases. He was a non-smoker, but a heavy drinker for the previous 40 years. He had no exposure to soil or pets, but did have a history of consuming raw meat.

There were no abnormal findings on physical examination. He had no fever and his other vital signs were also normal. He had no jaundice, right upper quadrant tenderness or hepatomegaly.

His anti-*Toxocara canis* IgG antibody

Correspondence: Kyoung Kon Kim, Department of Family Medicine, Gachon University Gil Medical Center, 1198 Guwol-dong, Namdong-gu, Incheon, 405-760, Republic of Korea. Tel: 82 10 3271 7177; Fax: 82 32 460 3354
E-mail: zaduplum@gilhospital.com

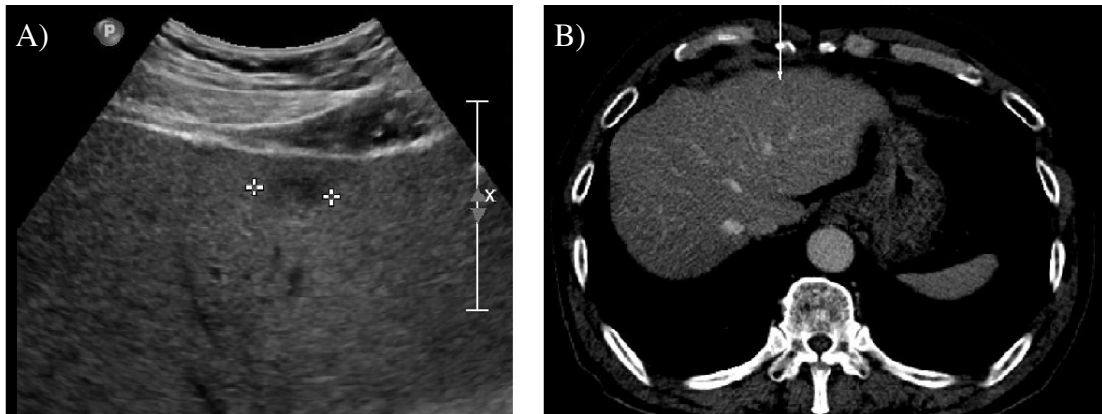


Fig 1—A) An oval, hypoechoic, ill-defined, 2 cm nodule in the left lobe of the liver. B) A 2.16 cm, oval, slightly hypodense, ill-defined nodule (arrow).

measured by ELISA was high [2.239 optical density (OD) units]. His total IgE was also high (1,469 IU/ml). His liver function tests and viral markers for hepatitis were within normal limits. Computed tomography (CT) of the liver revealed a 2.16 cm, oval, slightly hypodense, ill-defined nodule in the third segment of the liver, seen during the portal venous phase of the scan (Fig 1B). A liver biopsy was not performed because of patient reluctance and potential complications of the procedure. On the basis of these findings we diagnosed hepatic toxocariasis.

He was treated with albendazole 400 mg twice daily for 5 days.

DISCUSSION

Toxocara canis and *Toxocara cati* are parasitic roundworms that use dogs and cats, respectively, as their definitive hosts. Humans become infected with *Toxocara* when they ingest ova from contaminated sources or larvae in uncooked meat (Hossack *et al*, 2008). *Toxocara* are common parasites that have a worldwide distribution (Despommier, 2003). In Korea, toxocariasis cases have been increasing

among adults (Despommier, 2003). Kwon *et al* (2006) reported the prevalence of toxocariasis was 60% among patients with unknown eosinophilia. This may be due to the popular habit of eating raw meat for recuperation (Kwon *et al*, 2006; Hossack *et al*, 2008). This reported patient is thought to have acquired his infection via eating raw meat. There are two main toxocariasis syndromes: VLM and ocular larva migrans (OLM) (Magnaval *et al*, 2001). In patients with VLM, the liver is the visceral organ most commonly affected (Hossack *et al*, 2008).

Although most cases of toxocariasis are asymptomatic and often resolve spontaneously, clinical symptoms may occur as a consequence of damage caused by larvae migrating within organs (Hossack *et al*, 2008; Rohilla *et al*, 2013). In our case, the patient only complained of mild fatigue.

Toxocariasis patients almost always have peripheral blood eosinophilia (Hossack *et al*, 2008). The total serum IgE level is elevated in more than 50% of cases according to one report (Hogarth-Scott *et al*, 1969). The diagnosis of toxocariasis is usually serological (Despommier, 2003). ELISA detects IgG antibodies against

Toxocara excretory-secretory (TES) antigen (Iddawela *et al*, 2007). Our patient had elevated eosinophils, total IgE, and anti-*Toxocara* IgG antibodies. A contrast-enhanced CT scan in hepatic toxocariasis usually shows multiple, small (1.0-1.5 cm), oval or elongated, ill-defined, low-attenuation nodules which are best appreciated on the portal venous phase (Lim, 2008). The CT findings in our reported patient are comparable to the typical imaging findings except our patient had a single, large, slightly hypodense module. A finding of eosinophilic granulomas on tissue biopsy is strongly suggestive of hepatic toxocariasis; *Toxocara* larvae are rarely found on biopsy (Hossack *et al*, 2008). However, a tissue biopsy is not necessary to make the diagnosis.

Clinicians should consider hepatic toxocariasis as the possible diagnosis in any individual who presents with unknown peripheral blood eosinophilia and ill-defined hepatic lesions on ultrasound or CT imaging.

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