

# An Uncommon Diagnostic Method for Ascariasis

## ASKARIYAZİS İÇİN ALIŞILMADIK BİR TANI YÖNTEMİ

Mevlüt BAŞKOL\*, Kadri GÜVEN\*\*, Şebnem GÜRİSOY\*\*\*, Nuri ERDOĞAN\*\*\*\*, Tansu SAV\*\*\*\*\*, Ömer ÖZBAKIR\*\*\*\*\*, Mehmet YÜCESOY\*\*\*\*\*

- \* Uz.Dr.,Erciyes Üniversitesi Tıp Fakültesi Gastroenteroloji BD,  
\*\* Doç.Dr., Erciyes Üniversitesi Tıp Fakültesi Gastroenteroloji BD,  
\*\*\* Yrd.Doç.Dr., Erciyes Üniversitesi Tıp Fakültesi Gastroenteroloji BD,  
\*\*\*\* Yrd.Doç.Dr., Erciyes Üniversitesi Tıp Fakültesi Radyodiagnostik AD,  
\*\*\*\*\* Arş.Gör.Dr., Erciyes Üniversitesi Tıp Fakültesi İç Hastalıkları AD,  
\*\*\*\*\* Prof.Dr., Erciyes Üniversitesi Tıp Fakültesi Gastroenteroloji BD, KAYSERİ

### Summary

Ascariasis is a public health problem especially in developing countries. It has been estimated that one-fourth of the world's population is infected with ascariasis. Two or three fecal smears are ordinarily sufficient to make the diagnosis. Nevertheless, diagnosis is not as simple as defined above and small bowel barium study may rarely helps in diagnosis as in our cases with intestinal ascariasis.

**Key Words:** Ascariasis, Diagnosis,  
Small bowel barium study

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### Özet

Askariyazis özellikle gelişmekte olan ülkeler başta olmak üzere tüm dünyada bir halk sağlığı sorunudur. Tüm dünya nüfusunun dörtte birinin askariyazis ile enfekte olduğu kabul edilmektedir. Tanıda iki veya üç kez gaytada parazit veya yumurtasının aranması genellikle yeterlidir. Bizim vakalarımızda olduğu gibi bazı tanı konulmamış vakalarda ince barsak pasaj grafisi tanı koydurucu olabilir.

**Anahtar Kelimeler:** Askariyazis, Tanı,  
İnce barsak pasaj grafisi

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*Ascaris lumbricoides* infestation has a worldwide distribution. Most of the infested individuals are asymptomatic. It has been estimated that one-fourth of the population in the world is infected with ascariasis. Prevalence of ascariasis in Turkey changes according to regions and reported as 2.2%, 7%, 5.5%, 10%, 34%, and 15% in Izmir, Kayseri, Malatya, Diyarbakır, Trabzon and Ankara respectively (1).

In this paper we report intestinal ascariasis in two patients with unexplained vague abdominal pain and negative stool examinations. Patients were researched thoroughly by different and expensive diagnostic tools.

### Case Reports

#### Case 1

A 70 year-old woman was admitted to gastroenterology department with poorly localized, vague abdominal pain and intermittent loose stools. Pain was not associated with meals and did

not respond to H<sub>2</sub> receptor blockers and antacids. She had no weight loss. She had loose stool 2-3 days a week. Physical examination was normal. Plain abdominal film, stool analysis for parasites, guaiac test, upper gastrointestinal endoscopy, rectosigmoidoscopy, rectal biopsy, abdominal sonography and Doppler sonography were within normal limits. Small bowel barium study was performed due to persistence of symptoms, which revealed the presence of *ascaris lumbricoides* as multiple tubular filling defects (Figure 1).

#### Case 2

A 24 year-old man was admitted to gastroenterology department with crampy abdominal pain, nausea and intermittent vomiting. He had vague abdominal pain for years but pain became severe for the last two months. Periumbilical and right lower tenderness were established on physical examination. Patient was evaluated for unexplained abdominal pain. There were no radiologic

complication, patients do not have any physical findings. The diagnosis is based mainly on finding eggs, adult worms, or larvae. Because each female worm excretes 200.000 eggs per day, two or three faecal smears are ordinarily sufficient to make the diagnosis (1-3). Nevertheless, even if the stool analysis is performed, ascaris may not be detected and clinicians may have troubles to find out the cause of abdominal complaints. The large adult worms may be visualized, occasionally serendipi-

**Figure 1.** Small bowel barium study shows multiple tubular filling defects within jejunal and ileal segments.

findings on plain abdominal films. Stool analysis for parasites, guaiac test and abdominal sonography were normal. Upper endoscopy revealed duodenitis. Colonoscopy was within normal limits. Small bowel barium study was showed multiple tubular filling defects within ileal segments suggesting roundworms (Figure 2).

### Discussion

Ascariasis is a public health problem. The most common symptoms caused by ascariasis are vague abdominal discomfort and abdominal colic. Occasionally, diarrhea may be present as in case 1. The symptoms resemble to that of abdominal tumour or peptic ulcer disease. Intestinal perforation, Loeffler syndrome, hemoptysis, appendicitis, and peritonitis may occur during migration of *Ascaris lumbricoides*. Jaundice, right upper quadrant pain, and epigastric pain may occur if the worm migrates into the biliary or pancreatic ducts. Massive numbers of worms, particularly in children, may lead to malnutrition due to parasitic behaviour of the worms. Unless ascariasis infestation cause any

**Figure 2.** Small bowel barium study of ileal segments reveals tubular defects suggesting roundworms.

tously, on contrast studies of the gastrointestinal tract<sup>(4)</sup>. In both of our cases, the diagnosis could not be achieved by routine laboratory and endoscopic work up. However, small bowel barium studies revealed multiple roundworms within jejunal and/or ileal segments. In conclusion, clinicians should bear ascariasis in mind while evaluating a patient who suffers from abdominal pain, even with negative stool examinations. Small bowel barium studies may help for a definitive diagnosis, however, since patients are exposed to radiation with this technique, it should be chosen at the end.

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**Yazışma Adres:** Dr. Mevlüt BAŞKOL  
Erciyes Üniversitesi Tıp Fakültesi  
Gastroenteroloji BD,  
38039 KAYSERİ  
gmbaskol@yahoo.com