



Ascaris through a chest tube: a rare presentation

Bir göğüs tüpü ile Ascaris: Nadir bir sunum

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A rare case of an Ascaris worm emerging through an intercostal chest tube is reported here because of its unusual presentation. A five-year-old male child had a liver abscess, which had ruptured into the right pleural cavity. An intercostal chest tube was inserted for right pleural effusion. On the 5th postoperative day, a 7 cm long worm was noticed emerging through the chest tube. *Ascaris lumbricoides* infestation can lead to serious complications because of the mobility of the worms. Though complications such as intestinal obstruction, volvulus, gangrene, pancreatitis, biliary obstruction, cholangiohepatitis, and liver abscess have been reported to occur, intrapleural ascariasis is an extremely rare situation. This report describes a clinical situation of intrapleural ascariasis and emphasizes the importance of remaining aware of this rare complication of ascariasis.

Key Words: Ascaris; chest tube; liver abscess.

Bu olgu, interkostal göğüs tübünden çıkan askaris solucanı gibi çok seyrek bir duruma sahip olması nedeniyle sunulmaktadır. Beş yaşındaki bir çocukta bulunan bir karaciğer absesi sağ plevral boşluğuna rüptüre olmuştur. Sağ plevral efüzyon için interkostal bir göğüs tüpü yerleştirilmiştir. Ameliyat sonrası beşinci günde, göğüs tüpünden gelen 7 cm uzunluğunda bir solucan fark edilmiştir. *Ascaris lumbricoides*, solucanların hareketliliği nedeniyle ciddi komplikasyonlara yol açabilmektedir. İntestinal obstrüksiyon, volvulus, gangren, pankreatit, biliyer obstrüksiyon, kolanjiyohepatit ve karaciğer absesi gibi komplikasyonların olduğu bildirilmekle birlikte intraplevral askariyazis son derece nadir bir durumdur. Bu sunum, yazı intraplevral askariyazisin bir klinik tablosu sunmakta ve bu komplikasyonun farkında olmanın önemini vurgulamaktadır.

Anahtar Sözcükler: Askaris; göğüs tüpü; karaciğer absesi.

CASE REPORT

A five-year-old male child was referred with a three-day history of right upper abdominal pain, high grade fever and anemia. There was no history of jaundice, hemoptysis, hematemesis or trauma. There was history of cough, passage of worms in stools and vomiting of a worm.

Physical examination revealed a weak, emaciated, febrile child with pallor and dehydration.

Abdominal examination revealed a distended abdomen with tender hepatomegaly.

Chest examination demonstrated dullness on percussion over the right lung field and decreased breath sounds on the right side. The remainder of the systemic examination was normal.

The chest computed tomography (CT) showed right pleural effusion (Fig. 1) and abdominal X-ray showed mild distention of the small bowel.

Abdominal ultrasonography was done, which showed abscess in the right lobe of the liver that had ruptured into the right pleural cavity. Based on the clinical and laboratory data, a diagnosis of ruptured liver abscess was made and the patient was placed on conservative management for liver abscess, which included intravenous (IV) fluids and antibiotics (ceftriaxone and sulbactam; metronidazole and amikacin) empirically. An intercostal chest tube was inserted for right-sided pleural collection. Approximately 200 ml of this purulent dirty white fluid was drained and sent for culture sensitivity, which demonstrated *Escherichia coli* sensitive to ceftriaxone, sulbactam and ciprofloxacin. Amikacin and metronidazole were stopped and ciprofloxacin was added to the antibiotic regimen. The patient responded to this management, fever and liver tenderness subsided, and the size of the abscess was documented to be decreasing on serial ultrasonography.



Fig. 1. Computed tomography showed right pleural effusion.

On the 5th post-operative day, a 7 cm long, grayish white worm was seen emerging through the chest tube. The worm was identified as *Ascaris*. The patient was administered albendazole 400 mg orally daily for three days. Chest tube drainage also decreased and began clearing daily. There was no air leak. There was no other associated lung pathology. On the 10th postoperative day, chest tube drainage was 25 ml and clear. The chest tube was removed and the patient was discharged on oral antibiotic (ciprofloxacin), which was stopped after one week. The patient has been followed for the last six months. He was followed every two weeks for the first three months and is now being seen monthly.

DISCUSSION

Ascariasis, of which *Ascaris lumbricoides* is the causative organism, is an important medical, social and economic problem in many underdeveloped countries where public health, sanitation and personal hygiene are at the lowest level.^[1-3] Infection occurs at all ages but is most common in children of pre-school or early school age.^[1-3] Both sexes are equally affected.^[1,2] Transmission of ascariasis to humans is from hand to mouth. Eggs of the parasite are ingested by eating contaminated food. The eggshell is digested by gastric juice, releasing the larvae. These larvae penetrate the intestinal wall and enter the blood or lymphatic vessels into the heart and lungs. They are filtered out by the capillaries of the lungs and later break into alveoli. There, they mature, ascend the trachea, and pass over the epiglottis by cough and then down the esophagus

to return to the intestine by swallowing.^[1-3] The adult worm resides in the gastrointestinal tract without causing any significant symptoms. However, when the environment in the intestines becomes unfavorable, such as with inflammation and obstruction, the *Ascaris* will migrate to other less hostile parts, which can lead to serious intra-abdominal complications such as biliary obstruction,^[1-4] cholangiohepatitis,^[3] liver abscess,^[2,5] pancreatitis,^[2,3] acute appendicitis,^[3,4] intestinal perforation^[2,3] and obstruction^[1-4,6-8] and granulomatous peritonitis,^[4,6,9] which may lead to significant malnutrition, morbidity and even mortality.^[1-3] Sen et al.^[10] reported a case of tuberculous pyopneumothorax with bronchopleural fistula in whom mature an *Ascaris* worm migrated from the intestines to lodge in the pleural cavity. Zamora Almeida^[11] reported a patient who underwent thoracic surgery due to acute respiratory syndrome in whom an *Ascaris* worm was surprisingly found obstructing the probe after an exploratory left thoracotomy. Our case report concerns intrapleural ascariasis as a rare complication and stresses the importance of its awareness. Radiology is not helpful in such cases.

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