ISSN: 2467-9283

OPEN ACCESS

INTERNATIONAL JOURNAL OF GRADUATE RESEARCH AND REVIEW

Indexing & Abstracting

Open Academic Journals Index (OAJI), InfoBase Index, Cosmos, ResearchGate, CiteFactor, Scholar Stear, JourInfo, ISRA: Journal-Impact-Factor (JIF), Root Indexing etc.

Impact Factors*

IBI factor: 3

Impact factor (OAJI): 0.101

SEM-Biotech Publishing

*Kindly note that this is not the IF of Journal Citation Report (JCR)

Vol-4, Issue-3

August 2018

Mini Review

Case Reports on Complicated Ascariasis lumbricoides

Nazia Yousef[1]*, Chanda Jabeen[1], Hammad Hassan[1]

[1]Shalamar Institute of Health Sciences, Lahore, Pakistan

Abstract

Ascaris lumbricoides is one of the most well-known helminthic parasites affecting humans, and Ascariasis remains common with > 1.2 billion infections globally. In 2010, an estimated of 819 million people globally have been infested with *A. lumbricoides*, constituting the most common infection among the other soil-transmitted helminthes. Above all, significant disability has been reported with *A. lumbricoides,* amounting towards 1.10 million years lived with disability (YLDs). Aim of this study is to give awareness regarding complication associated with Ascariasis lumbricoides because helminthic infestation is easily overlooked, the diagnosis of Ascariasis should be considered in patients who live in endemic areas and treated timely to prevent severe complications. Ascariasis generally occurs through hand-to-mouth ingestion of agricultural products or food contaminated with parasite eggs. Poor sanitation and inadequate sewage disposal play a key role in the maintenance and propagation of Ascariasis.

Keywords: Ascariasis; helminthic parasite; food contamination

Introduction

Ascaris lumbricoides is one of the most well-known helminthic parasites affecting humans, and Ascariasis remains common with > 1.2 billion infections globally (De Silva *et al*., 2003). The disease is present especially in rural areas of tropical and subtropical countries with poor hygiene and socioeconomic conditions. The global frequency of Ascariasis depends on a country's regional, climatic, economic, and cultural conditions (Mishra *et al*., 2008). *A.lumbricoides* infection occurs in all age groups but more commonly in preschool children (Steinberg *et al*.,2003). In 2010, an estimated of 819 million people globally have been infested with *A.lumbricoides*, constituting the most common infection among the other soil-transmitted helminthes. Above all, significant disability has been reported with *A. lumbricoides,* amounting towards 1.10 million years lived with disability (YLDs) (Pullan *et al*.,2014). Although Ascariasis cases are usually asymptomatic, infection leads to malnutrition in children and causes about 3000–60 000 deaths every year, usually as a result of intestinal obstruction (Baba *et al*., 2009). Ascariasis is usually asymptomatic, but it can cause serious intra-abdominal complications such as intestinal obstruction, volvulus, intussusception, biliary obstruction, cholangiohepatitis, liver abscess, pancreatitis, acute appendicitis, intestinal perforation, and granulomatous peritonitis. Intestinal obstruction is the most common complication (Wani *et al*., 2010). Roundworm has a worldwide incidence of 25% of the population and biliary ascariasis accounts for 10-17% of all cases of roundworm infestation, predominantly in developing countries in tropical and subtropical climates. In the bile duct, it causes pyogenic cholangitis (stenosis and pigmented stones), cholecystitis, pancreatitis and liver abscesses (Garcia *et al*., 2016). Ascariasis generally occurs through hand-to-mouth ingestion of agricultural products or food contaminated with parasite eggs. Poor sanitation and inadequate sewage

Cite this Article as:

N. Yousef *et al*. (2018) Int. J. Grad. Res. Rev. Vol 4(3): 64-66

[1]*Corresponding author
Nazia Yousef,
Shalamar Institute of Health Sciences, Lahore, Pakistan
Email: naziayousif19@gmail.com

Peer reviewed under authority of IJGRR

disposal play a key role in the maintenance and propagation of ascariasis (Aleksandra *et al*., 2016).

Aim

Aim of this study is to give awareness regarding complication associated with Ascariasis lumbricoides because helminthic infestation is easily overlooked, the diagnosis of ascariasis should be considered in patients who live in endemic areas and treated timely to prevent severe complications.

Data bases which include Google Scholar, CINAHIL, PubMed, ERIC, and Science Direct were searched.

Case Reports

First case of Ascariasis that presented with Hemophagocytic lymphohistiocytosis (HLH) reported in Turkey. A 5-year-old male belonging to the Kastamonu Province presented with a 13-day history of swelling in the neck and behind the left ear. A hard, painful mass on the left side of the neck was palpated. Cervical ultrasonography (USG) showed multiple lymphadenopathies in the left submandibular region and left jugular chain and conglomeration in some of the lymphadenopathies. Abdominal USG showed multiple, long, linear, echogenic tubular structures in the ileal segment that were consistent with *A. lumbricoides* infestation. Stool testing showed a large number of *A. lumbricoides* eggs (Bayhan *et al*., 2015).

In South Serbia a case of a 7-year-old boy admitted to Pediatric Surgery because of intestinal obstruction caused by ascariasis. On admission, the patient presented with colicky abdominal pain, bile-stained vomiting and meteorism. Abdominal radiographs and ultrasound studies were indicative of small-bowel obstruction due to roundworms (Stojanovic *et al*., 2011).

In Egypt A 12-year-old boy from Tokh El Khail, Minia governorate, Egypt, was admitted to the emergency department of Minia University Hospital presented with acute colicky periumbilical abdominal pain not referred to other sites, vomiting and constipation for 3 days. Abdominal ultrasonography showed presence of worms (Abdellatif *et al*.,2013).

Another case reported in Turkey in which 4-year-old Caucasian male child of Turkish nationality was admitted to the emergency department with abdominal pain and biliary vomiting. X-ray showed air-fluid levels indicative of intestinal obstruction due to *A. lumbricoides*. Another case reported in Turkey 7-year-old Caucasian boy of Turkish nationality was admitted to the emergency department with abdominal pain and vomiting for three days. His x-ray and sonographic features were similar to the first patient (Yetim *et al*., 2009).

A 66-year-old Polish male was reported in Poland. The patient reported coughing, a recurrent low-grade fever, night sweats, malaise, and weakness. 3months after the onset of respiratory failures, a mature form of Ascaris spp. appeared in the patient's mouth (Aleksandra, 2016).

In Karachi, Pakistan a rare case of Ascaris lumbricoides was presented as a pseudo tumorous mass A 35-year-old woman presented with lower abdominal pain and amenorrhoea. CT showed a thick walled lobulated mass with Ascaris adjacent to caecum along with the presence of a left ovarian mass. The peroperative findings were a tubular mass with central tunneling containing an Ascaris lumbricoides (Bokhari *et al*.,2009).

Another case was reported in Lahore Pakistan in which Hepatobiliary Ascariasis Complicated Pancreatitis a 52 year old female presented in the emergency department Mayo hospital Lahore, Pakistan, with the complaint of epigastric pain for three days. Ultrasound showed Ascaris lumbricoides invading the biliary channels. Serum amylase was elevated and the patient was managed conservatively, as for acute pancreatitis (Azhar *et al*., 2015).

Conclusion

So, it is concluded that timely diagnosis and treatment of Ascaris lumbricoides is very important to prevent further complications.

References

Abdellatif MZ, Belal US, Abdel-Hafeez EH, Atiya AM, Norose K (2013) Ascaris lumbricoides causing acute abdomen: a case report. *Eastern Mediterranean Health Journal* **19**(12): 1035.

Aleksandra L, Barbara Z, Natalia LA, Danuta KB, Renata GK, Ewa ML (2016) Respiratory failure associated with Ascariasis in a patient with immunodeficiency. Case reports in infectious diseases. 2016.

Azhar M, Sheikh AS, Khan A, Mustafa S, Shah IA, Hameed B (2015) Hepatobiliary ascariasis complicated by pancreatitis. *Journal of Ayub Medical College Abbottabad* **27**(2): 479-81.

Baba AA, Ahmad SM, Sheikh KA (2009) Intestinal ascariasis: the commonest cause of bowel obstruction in children at a tertiary care center in Kashmir. *Pediatric Surgery International* **25**: 1099–1102.

Bayhan Gİ, Çenesiz F, Tanir G, Özkan AT, Çinar G (2015) First Case of Ascaris lumbricoides Infestation Complicated with Hemophagocytic Lymphohistiocytosis. *Türkiye Parazitolojii Dergisi* **39**(2): 164.

Bokhari I, Khan NF, Qurrat-ul-Ain Tahir NA, Khan A (2009) A Case of Pseudotumorous Form of Ascaris. *Journal of the College of Physicians and Surgeons Pakistan* **19**(10): 663-664.

De Silva NR, Brooker S, Hotez PJ, Montresor A, Engels D, Savioli L (2003) Soil-transmitted helminth infections: updating the global picture. *Trends in parasitology* **19**(12): 547-551.

Garcia-Espinoza JA, Vásquez-Ciriaco S, Doña-Jaimes R, Aragon-Soto R, Velazco-Budar C, López-Martínez E (2016) Parasitosis in the bile duct, report of 3 cases and literature review. *Revista Médica del Hospital General de México* **81**(s1):18-23.

Mishra PK, Agrawal A, Joshi M, Sanghvi B, Shah H, Parelkar SV (2008) Intestinal obstruction in children due to Ascariasis: A tertiary health centre experience. *Afr J Paediatr Surg* **5**(2): 65-70.

Pullan RL, Smith JL, Jasrasaria R, Brooker SJ (2014) Global numbers of infection and disease burden of soil transmitted helminth infections in 2010. *Parasites & vectors* **7**(1): 37.

Steinberg R, Davies J, Millar A, Brown R, Rode H (2003) Unusual intestinal sequelae after operations for Ascaris lumbricoides infestation. *Pediatric Surgery International* **19**(1-2): 85-87.

Stojanovic M, Slavkovic A, Stojanovic M, Marjanovic Z, Bojanovic M (2011) A rare case of intestinal obstruction due to ascariasis in Niš, south Serbia. *Open Medicine* **6**(4): 390-394.

Wani I., Rather M., Naikoo G., Amin A., Mushtaq S., Nazir M., Intestinal Ascariasis in Children, *World J.Surg*., 2010, 34, 963-968

Yetim I, Ozkan OV, Semerci E, Abanoz R (2009) Rare cause of intestinal obstruction, Ascaris lumbricoides infestation: two case reports. *Cases journal* **2**(1): 7970.