Hepatobiliary Infestation by *Ascaris lumbricoides*

BQ Sander^{1*}, EP Silva², SR Farfan³, LD Conceição⁴, SG Godinho⁵, WCC Vieira⁶, FMB Pires⁷, HG Sampaio⁸, JR Pereira⁹, FRB Miranda¹⁰, CHR Castro¹¹ and IS Barra¹²

¹Sander Medical Center, Brazil

²Hospital Portela, Brazil

³Hospital of Santa Rosália, Brazil

⁴HC of Alagoinhas, Brazil

⁵Hospital Imaculada Conceição, Brazil

⁶Clínica AMA, Brazil

⁷Tower Center, Brazil

⁸HapClínica Pituba, Brazil

⁹GV Clínicas, Brazil

¹⁰Clínica São José,, Brazil

¹¹Clínica São Francisco de Assis, Brazil

¹²Hospital Portela, Brazil

*Corresponding Author: BQ Sander, Sander Medical Center, Brazil.

Received: March 12, 2020

Published: March 30, 2020

© All rights are reserved by BQ Sander., et al.

Abstract

Hepatobiliary infestation by *Ascaris lumbricoides* is a common condition with extremely rare complications such as liver abscess, until most common complications such as obstructive jaundice. Prevalence is more frequent in developing countries with poor sanitary conditions, where the prevalence of *Ascaris* is high.

Keywords: *Ascaris lumbricoides*; Hepatobiliary Infestation

Aim of the Study

The aim of this study was review the literature covering issues such as diagnosis and treatment of hepatobiliary infestation and its complications.

Materials and Methods

We seek papers in Pubmed® using the keywords ascariasis, pyogenic hepatic abscess, biliary ascariasis, ERCP, endoscopy, ultrasonography, hepatobiliary ascariasis.

Discussion

Ascariasis is a disease caused by the roundworm *Ascaris lumbricoides*, being the most common intestinal parasite in the world, reaching about 25% of the population [2,3,10-25,27,28] and accounts for about 20,000 deaths per year [2,3,10] affecting both sexes equally [2,3,10,13,20-25,27,28].

The migratory tendency of *Ascaris lumbricoides* favors entry into the biliary tract and pancreas, causing obstructive jaundice with ascending cholangitis, or pancreatitis. Younger forms amounting to intrahepatic bile ducts can cause liver abscesses [2,3,12,13,24-27].

After entering the bile duct *Ascaris* excretes various types of polypeptides that produce allergic reactions causing spasm of the

sphincter of Oddi by the action of chemical irritants [25]. Cholestasis resulting translocation of intestinal bacteria associated with the worm into the bile duct leading to pyogenic ascending cholangitis, cholecystitis, pancreatitis and pancreatic abscess.

Liver abscesses pyogenic side infestation *Ascaris* are rare comprising about 1% of all cases, which may be greater prevalence in endemic areas [9].

Pregnant females may migrate to the bile ducts through which minors may alcansar where the liver parenchyma after the deposition of eggs they die. Through this migration can be bacterial translocation by the worm, which would lead to pyogenic abscesses with polymicrobial flora in general source intestinal [25].

Conclusion

Ascaris infection in most cases are asymptomatic and without major repercussions, but the complications, though rare, are of great morbidity, and outcome and severity than when the worm is alive and when the worm is dead, being more severe than those in the worm is dead, needing early intervention in cases of obstruction, or bowel, or biliary tract.

Conservative treatment in cases of hepatobiliary infestation is still the mainstay of management of complications, with the exceptions in cases where a flaw in the conservative treatment, pyogenic cholangitis or acute cholecystitis unresolved, worms associated calculations, liver abscess.

Bibliography

1. Mattos Angelo Alves De and Dantas-Corrêa Esther Buzaglo. "Tratado de Hepatologia". 1st edition. Rio de Janeiro: Rubio (2010).

2. Prado Joaquim. "Tratado das Enfermidades Gastrintestinais e Pancreáticas". 1st edition. São Paulo: Roca (2008).

3. Dani Renato. "Gastroenterologia Essencial". 3rd edition. Rio de Janeiro: Guanabara Koogan (2006).

4. Floch Martin H., et al. "Gastroenterologia de Netter". 1st edition. Philadelphia: Elsevier Saunders (2005).

5. Gardner Ernest, et al. "Anatomia". 4th edition. Rio de Janeiro: Guanabara Koogan, (1998).

6. Gray Henry. "Tratado de Anatomia Humana". 24th edition. Rio de Janeiro: Guanabara Koogan (1946).

7. Rohen Johannes W and Yokochi Chihiro. "Anatomia Humana". 2nd edition. São Paulo: Manole (1989).

8. Sobotta Johannes. "Atlas de Anatomia Humana". 20nd edition. Rio de Janeiro: Guanabara Koogan (1995).

9. Solto José Dutra and Fontes, Cor Jésus Fernandes. "O Fígado e as Infecções". In: MATTOS, Angelo Alves de Dantas-Corrêa, Esther Buzaglo. Tratado de Hepatologia. 1st edition. Rio de Janeiro: Rubio (2010): 22 277-280.

10. Cunha Aloísio Sales da and Ferrari Maria de Lourdes de Abreu. "Parasitoses Intestinais". In: PRADO, Joaquim. Tratado das Enfermidades Gastrintestinais e Pancreáticas. 1st edition. São Paulo: Roca 66 (2008): 927-928.

11. Chebli Júlio Maria Fonseca Gaburri., et al. "Pancreatite Aguda". In: Prado, Joaquim. Tratado das Enfermidades Gastrintestinais e Pancreáticas. 1st edition. São Paulo: Roca 80 (2008): 1110-1114.

12. Alam S. "Comparative study on presentation of biliary ascariasis with dead and living worms". *Saudi Journal of Gastroenterology* 16.3 (2010): 203-206.

13. Ogata H., et al. "Multilocular pyogenic hepatic abscess complicating *Ascaris lumbricoides* infestation". *Internal Medicine* 39.3 (2000): 228-230.

14. Seddik H., et al. "Liver abscess revealing an hepatobiliary ascariasis". *Gastroenterologie Clinique et Biologique* 32.11 (2008): 979-981.

15. Astudillo JA., et al. "Ascariasis in the hepatobiliary system: laparoscopic management". *The Journal of the American College of Surgeons* 207.4 (2008): 527-532.

16. Târcoveanu E., et al. "Unusual forms of liver abscesses". *Revista Medico-Chirurgicala a Societatii de Medici si Naturalisti din Iasi* 112.3 (2008): 688-697.

17. Robbani I., et al. "Worms in liver abscess: extensive hepatobiliary ascariasis". *Digestive and Liver Disease* 40.12 (2008): 962.

18. Das CJ., et al. "Imaging of ascariasis". *Australasian Radiology* 51.6 (2007): 500-506.

19. Alam S., et al. "Presentation and endoscopic management of biliary ascariasis". *Southeast Asian Journal of Tropical Medicine and Public Health* 38.4 (2007): 631-635.

20. Bari S. "Ascaris liver abscess in children". *Journal of Gastroenterology* 42.3 (2007): 236-240.

21. Malik AH., et al. "Management of hepatobiliary and pancreatic ascariasis in children of an endemic area". *Pediatric Surgery International* 22.2 (2006): 164-168.

22. Bahú Mda G., "Hepatobiliary and pancreatic complications of ascariasis in children: a study of seven cases". *Journal of Pediatric Gastroenterology and Nutrition* 33.3 (2001): 271-275.

23. Khuroo MS. "Hepatobiliary and pancreatic ascariasis". *Indian Journal of Gastroenterology* 20.1 (2001): C28-C32.

24. Chakrabarti I., et al. "Radio-pathological diagnosis of hepatobiliary ascariasis: A rare entity". *Journal of Cytology* 28.3 (2011): 114-116.

25. Ferreira MA., et al. "Pyogenic liver abscess in children: some observations in the Espírito Santo State, Brazil". *Archives of Gastroenterology* 34.1 (1997): 49-54.

26. Nagakura K., et al. "Serologic findings in hepatic ascariasis: a case report". *Tohoku Journal of Experimental Medicine* 167.2 (1992): 121-126.

27. Mukhopadhyay M. "Biliary ascariasis in the Indian subcontinent: a study of 42 cases". *Saudi Journal of Gastroenterology* 15.2 (2009): 121-124.

28. Lee KH., et al. "Recurrent pancreatitis secondary to pancreatic ascariasis". *Medical Journal* 50.6 (2009): e218-e219.

Assets from publication with us

- Prompt Acknowledgement after receiving the article
- Thorough Double blinded peer review
- Rapid Publication
- Issue of Publication Certificate
- High visibility of your Published work

Website: www.actascientific.com
Submit Article: www.actascientific.com/submission.php
Email us: editor@actascientific.com
Contact us: +91 9182824667