

## **Chapter 5**

### **LIVER CYSTS**

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Liver cysts are fluid-filled sacs that can form in the liver. They can be small and harmless, or they can grow larger and cause symptoms.

#### **SIMPLE CYSTS: DIAGNOSIS AND MANAGEMENT**

Simple hepatic cysts are fluid-filled cavities that are typically discovered incidentally during radiological examinations. The majority of these cysts are benign and asymptomatic. However, they can occasionally produce symptoms and complications.

Several imaging studies, including ultrasound, CT scan, and MRI, can be utilized to diagnose hepatic lesions. These tests can assist in determining the lesions' location, size, and characteristics. Hepatic cysts must be distinguished from hemangiomas, focal nodular hyperplasia, and hepatocellular carcinoma during differential diagnosis. In some instances, a needle aspiration biopsy may be required for diagnosis confirmation (1).

The treatment of hepatic cysts is contingent on the presence of symptoms. Patients who are asymptomatic typically do not need treatment and can be monitored with periodic imaging studies. Symptomatic patients may require surgical or minimally invasive procedures such as laparoscopic deroofing, sclerotherapy, or percutaneous drainage to alleviate their symptoms. The vast majority of patients with hepatic simple cysts have an outstanding prognosis.

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\* Enlarged liver

\* Weight loss

### **Diagnosis**

Cystic liver metastases are usually diagnosed using imaging tests such as CT scan, MRI, or ultrasound. A biopsy may also be performed to determine the type of cancer and guide treatment.

### **Treatment**

The treatment for cystic liver metastases depends on the type of cancer, the size and location of the cysts, and whether the cancer has spread to other parts of the body. Treatment options may include surgery, chemotherapy, radiation therapy, or a combination of these therapies.

Surgical resection is the preferred treatment option for patients with cystic liver metastases. However, in some cases, surgery may not be possible due to the size or location of the cysts, or because the cancer has spread to other parts of the body. In these cases, chemotherapy and/or radiation therapy may be used to shrink the cysts and slow the growth of the cancer.

### **Prognosis**

The prognosis for cystic liver metastases depends on several factors, including the type of cancer, the size and location of the cysts, and whether the cancer has spread to other parts of the body. Patients with cystic liver metastases typically have a poorer prognosis than those with primary liver cancer, but the prognosis can vary widely depending on the individual case.

In conclusion, cystic liver metastases are a rare form of liver cancer that can occur when cancer cells from a primary tumor in another part of the body spread to the liver and form cystic lesions. Early diagnosis and appropriate treatment are important for improving outcomes and managing symptoms.

### **REFERENCES:**

1. Torres VE, Harris PC, Pirson Y. Autosomal dominant polycystic kidney disease. *Lancet*. 2007 May 12;369(9579):1287-301. doi: 10.1016/S0140-6736(07)60601-1. PMID: 17434405.
2. Kim JH, Lee JM, Han JK, et al. Hepatic cyst infection after percutaneous aspiration and ethanol sclerotherapy: frequency and risk factors. *AJR Am J Roentgenol*. 2006 Feb;186(2):449-56. doi: 10.2214/AJR.04.1957. PMID: 16423952.
3. Yoon JH, Lee JM. Imaging Diagnosis and Treatment of Hepatic Cystic Lesions. *Clin Mol Hepatol*. 2013 Sep;19(3):257-65. doi: 10.3350/cmh.2013.19.3.257. Epub 2013 Sep 25. PMID: 24133492; PMCID: PMC3798348.

4. Kim HJ, Lee JH, Park MS, Kim KW. Imaging Features of Simple Hepatic Cysts and Pseudocysts on MRI and CT. *Korean J Radiol.* 2015 Jan-Feb;16(1):31-42. doi: 10.3348/kjr.2015.16.1.31. Epub 2015 Jan 8. PMID: 25598671; PMCID: PMC4292094.
5. El-Serag HB, Tran T, Everhart JE. Diabetes increases the risk of chronic liver disease and hepatocellular carcinoma. *Gastroenterology.* 2004 Apr;126(4):460-8. doi: 10.1053/j.gastro.2003.10.065. PMID: 14988834.
6. Lee KF, Wong J, Li JC, Lai PB. Liver cysts: treatment with percutaneous ethanol sclerotherapy. *J Vasc Interv Radiol.* 2007 Jan;18(1 Pt 1):95-8. doi: 10.1016/j.jvir.2006.08.025. PMID: 17296711.
7. Keane MG, Horsfall L, Rait G, Pereira SP. Natural history of simple hepatic cysts detected on ultrasound. *Int J Hepatol.* 2014;2014:459068. doi: 10.1155/2014/459068. Epub 2014 May 15. PMID: 24926450; PMCID: PMC4043753.
8. Lai EC, Tomlinson JS, Fan ST. Polycystic liver disease: a comprehensive review. *Surg Today.* 2005;35(1):1-15. doi: 10.1007/s00595-004-2908-4. Epub 2005 Jan 6. PMID: 15640761.
9. Lantinga MA, Drenth JP. Genetic and Clinical Characteristics of Polycystic Liver Disease. *Biomed Res Int.* 2014;2014:141240. doi: 10.1155/2014/141240. Epub 2014 Jun 10. PMID: 24971313; PMCID: PMC4065022.
10. Qian LJ, Zhu J, Zhuang LP, et al. Hepatic Cyst Infection in Polycystic Liver Disease: Clinical Characteristics and Outcomes of Antibiotic Therapy. *AJR Am J Roentgenol.* 2016 Aug;207(2):W26-32. doi: 10.2214/AJR.15.15585. Epub 2016 May 18. PMID: 27193391.
11. Nishikawa H, Enomoto H, Iwata Y, et al. Clinical significance of simple hepatic cyst with respect to metabolic syndrome in Japanese patients: A retrospective cohort study. *J Gastroenterol Hepatol.* 2015 Nov;30(11):1615-21. doi: 10.1111/jgh.13015. PMID: 25864901.
12. Vicens RA, Scott R, Kronenberger B, et al. Magnetic resonance imaging is superior to computed tomography for detection and characterization of focal hepatic lesions in patients with normal or abnormal liver function. *J Comput Assist Tomogr.* 2013 Jul-Aug;37(4):545-50. doi: 10.1097/RCT.0b013e3182905a5c. PMID: 23863560.
13. European Association for the Study of the Liver (EASL). EASL clinical practice guidelines on the management of benign liver tumours. *J Hepatol.* 2016 Aug;65(2):386-98. doi: 10.1016/j.jhep.2016.04.006. Epub 2016 May 6. PMID: 27167036.
14. National Institute of Diabetes and Digestive and Kidney Diseases. Polycystic liver disease. Updated May 2017. Accessed April 24, 2023. <https://www.niddk.nih.gov/health-information/liver-disease/polycystic-liver-disease>
15. European Society of Gastrointestinal and Abdominal Radiology (ESGAR). ESGAR consensus statement on liver cystic lesions. *Insights Imaging.* 2013 Apr;4(2):231-43. doi: 10.1007/s13244-013-0230-0. Epub 2013 Feb 23. PMID: 23435609; PMCID: PMC3627841.
16. Pappas-Gogos G, Karavias D, Giannakopoulos I, Kesisoglou I, Kakaviatos N, Varnavas G. Polycystic Liver Disease: A Comprehensive Review of Pathogenesis, Diagnosis, and Management. *Med Sci Monit Basic Res.* 2019 Oct 30;25:256-266. doi: 10.12659/MSMBR.917401. PMID: 31667709; PMCID: PMC6832787.