

KARACİĞER KİST HIDATİĞİ

15.

BÖLÜM

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GİRİŞ

Hidatik hastalık yada ekinokokozda hematojen yayılım primer olarak karaciğere olur fakat akciğer (%20), beyin ve kemik (%20) gibi organlara da yayılabilir. Dokuya yerleşim sonrasında sestod gelişimi yavaş büyüyen kist şeklinde olur. Etkilenen olguların %80’inde klinik bulgu tek organda solid kist şeklindedir¹. Hidatik kistler sıklıkla anterior-inferior yada posterior-inferior segmentler olmak üzere genelde karaciğer sağ lobunu tutar².

PATOJENEZ VE ETYOLOJİ

İnsan enfeksiyonunda ilk aşama asemptomatik inkübasyon periyodudur. Karaciğerde dokuya yerlestikten sonra onkosferler kist oluşturmaya başlar. Kistler genellikle unioküler ve 1 cm ile 15 cm arasında her yere yerleşebilirler. Hepatik kistik ekinokokozda, kist büyümesi yılda 1–2 mm ila 10 mm arasında değişir³. Enfeksiyondan 3 hafta sonra gözle görünür hidatik kist oluşur ve küresel bir şekilde yavaşça büyür. Konak dokusunda kist çevresinde perikist yada fibröz kapsül gelişir. Kist duvarı 2 kattan oluşur, dıştaki jelatinöz membran (ektokist) ve içteki germinal membran (endokist)⁴. İçteki germinal membran kist içine çıkıştı yapan ekinokok protoskolekslerini içerirler. Bazen kız kistler de kistin çevresinde oluşur

fakat hastaların çoğunda tek solid kist bulunmaktadır. Kistler sıvı birikmesine bağlı yavaşça büyür ve zamanla semptomların oluşmasına yol açar⁵.

SEMPOMALAR

Klinik bulgu ve semptomlar lokalizasyona, boyuta, çevre organlarla ilişkisine ve komplikasyonlara bağlıdır⁶. Karaciğer kist hidatüğü komplikasyonlar gelişmeden önce asemptomatiktir. Kisten semptomatik olması için temel mekanizmalar rüptür sonucu enfeksiyon ve anaflaksi olması, çevre dokulara fistül gelişimi ve çevre yapılara kitle etkisi oluşturmasıdır⁷. Enfekte olmuş hasta küt Sağ üst kadran ağrısı yada karında distansiyonla başvurabilir². Karaciğer hidatik kistlerinin yaygın klinik özellikleri şunlardır: Hepatik kitle, sağ hipokondriyal ağrı, bulantı ve kusma. Kronik enfeksiyon, bilier kolik, hepatomegali, fistül, abse, sarılık, asit, portal hipertansiyon ve inferior vena kava yada Budd-Chiari sendromu ile seyredebilir⁸.

TANI

Karaciğer kist hidatığı için özel olarak kullanılabilen rutin çalışılan bir kan tahlili yoktur. Hipobilirubinemii ve artmış alkalin fosfataz ve gama glutamyl transferaz seviyeleri safra yoluna kist

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hidatiğinin toraks boşluğuna, plevraya ve bronşa açılmasıdır.

Kaynaklar

1. Yeo C.J (2012) Shackelford's surgery of the alimentary tract (seventh edition). Elsevier.
2. Brunicardi F.C. (2016) Schwartz cerrahinin ilkeleleri (10.baskı) (Mahir Özmen, Çev. Ed.). Güneş Tıp Kitapevi.
3. Pakala T, Molina M, Wu GY. Hepatic Echinococcal Cysts: A Review. *J Clin Transl Hepatol.* 2016;4(1):39-46.
4. Townsend C.M.(2012). Sabiston Textbook of Surgery The biological basis of modern surgical practice (19th edition). Elsevier.
5. Morita S.Y.,Balch C.M., Klimberg V.S.,Pawlik T.M, Posner M.C, Tanabe K.K (2017). Textbook of complex general Surgical Oncology. Mc Graw Hill education.
6. Gulsun S, Cakabay B, Nail Kandemir M, et al. Retrospective analysis of echinococcosis in an endemic region of Turkey, a review of 193 cases. *Iran J Parasitol.* 2010;5(3):20-26.
7. Agudelo Higuita NI, Brunetti E, McCloskey C. Cystic Echinococcosis. *J Clin Microbiol.* 2016;54(3):518-523.
8. Marti-Bonmati L, Serrano F. Complications of hepatic hydatid cysts: ultrasound, computed tomography, and magnetic resonance diagnosis. *Gastrointest Radiol.* 1990; 15: 119–125.
9. Mihmanli M, Idiz UO, Kaya C, et al. Current status of diagnosis and treatment of hepatic echinococcosis. *World J Hepatol.* 2016;8(28):1169-1181.
10. Abbas R, Khalid R, Abdelouahed L, et al. Abdominal effusion revealing an exophytic hydatid cyst of the liver has developed under mesocolic. *Pan Afr Med J.* 2019;34:101.
11. Brunetti E, Tamarozzi F, Macpherson C, et al. Ultrasound and Cystic Echinococcosis. *Ultrasound Int Open.* 2018;4(3):E70-E78.
12. Keong B, Wilkie B, Sutherland T, et al. Hepatic cystic echinococcosis in Australia: an update on diagnosis and management. *ANZ J Surg.* 2018;88(1-2):26-31.
13. WHO Informal Working Group. International classification of ultrasound images in cystic echinococcosis for application in clinical and field epidemiological settings. *Acta Trop.* 2003; 85: 253–261.
14. Oruç E, Yıldırım N, Topal NB, et al. The role of diffusion weighted MRI in the classification of liver hydatidcysts and differentiation of simple cysts and abscesses from hydatidcysts. *Diagn Interv Radiol* 2010;16:279-87.
15. Mehta P, Prakash M, Khandelwal N. Radiological manifestations of hydatid disease and its complications. *Trop Parasitol.* 2016;6(2):103-112.
16. Suwan Z. Sonographic findings in hydatid disease of the liver: comparison with other imaging methods. *Ann Trop Med Parasitol* 1995;89(3): 261–9.
17. Stojkovic M, Rosenberger K, Kauczor HU, et al. Diagnosing and staging of cystic echinococcosis: how do CT and MRI perform in comparison to ultrasound? *PLoS Negl Trop Dis* 2012;6(10):e1880.
18. Aksoy S, Erdil I, Hocaoglu E, et al. The Role of Diffusion-Weighted Magnetic Resonance Imaging in the Differential Diagnosis of Simple and Hydatid Cysts of the Liver. *Niger J Clin Pract.* 2018;21(2):212-216.
19. Inan N, Arslan A, Akansel G, et al. Diffusion-weighted imaging in the differential diagnosis of simple and hydatid cysts of the liver. *AJR Am J Roentgenol.* 2007;189(5):1031-1036.
20. Erden A, Ormeci N, Fitöz S, et al. Intrabiliary rupture of hepatic hydatid cysts: diagnostic accuracy of MR cholangiopancreatography. *AJR Am J Roentgenol.* 2007;189(2):W84-W89.
21. Hosch W, Junghanss T, Stojkovic M, et al. Metabolic viability assessment of cystic echinococcosis using high-field 1H MRS of cyst contents. *NMR Biomed* 2008;21(7):734-754.
22. Falagas ME, Bliziotis IA. Albendazole for the treatment of human echinococcosis: a review of comparative clinical trials. *Am J Med Sci.* 2007;334(3):171-179.
23. Brunetti E, Kern P, Vuitton DA; Writing Panel for the WHO-IWGE. Expert consensus for the diagnosis and treatment of cystic and alveolar echinococcosis in humans. *Acta Trop.* 2010;114(1):1-16.
24. Stojkovic M, Zwahlen M, Teggi A, et al. Treatment response of cystic echinococcosis to benzimidazoles: a systematic review. *PLoS Negl Trop Dis.* 2009;3(9):e524.
25. Aktan AO, Yalin R. Preoperative albendazole treatment for liver hydatid disease decreases the viability of the cyst. *Eur J Gastroenterol Hepatol.* 1996;8(9):877-879.
26. Arif SH, Shams-Ui-Bari, Wani NA, et al. Albendazole as an adjuvant to the standard surgical management of hydatid cyst liver. *Int J Surg.* 2008;6(6):448-451.
27. Nazligul Y, Kucukazman M, Akbulut S. Role of chemotherapeutic agents in the management of cystic echinococcosis. *Int Surg.* 2015;100(1):112-114.
28. Gupta N, Javed A, Puri S, et al. Hepatic hydatid: PAIR, drain or resect?. *J Gastrointest Surg.* 2011;15(10):1829-1836.
29. Körögöl M, Erol B, Gürses C, et al. Hepatic cys-

- tic echinococcosis: percutaneous treatment as an outpatient procedure. *Asian Pac J Trop Med.* 2014;7(3):212-215.
- 30. Ormeci N. PAIR vs Örmeci technique for the treatment of hydatid cyst. *Turk J Gastroenterol.* 2014;25(4):358-364.
 - 31. Bakdik S, Arslan S, Oncu F, et al. Percutaneous treatment of hepatic cystic echinococcosis: the success of alcohol as a single endocavitary agent in PAIR, catheterization, and modified catheterization techniques. *Radiol Med.* 2018;123(2):153-160.
 - 32. Kahriman G, Ozcan N, Dogan S, et al. Percutaneous treatment of liver hydatid cysts in 190 patients: a retrospective study. *Acta Radiol.* 2017;58(6):676-684.
 - 33. Akhan O, Salik AE, Ciftci T, et al. Comparison of Long-Term Results of Percutaneous Treatment Techniques for Hepatic Cystic Echinococcosis Types 2 and 3b. *AJR Am J Roentgenol.* 2017;208(4):878-884.
 - 34. Ballı O, Ballı G, Cakir V, et al. Percutaneous Treatment of Giant Cystic Echinococcosis in Liver: Catheterization Technique in Patients with CE1 and CE3a. *Cardiovasc Intervent Radiol.* 2019;42(8):1153-1159.
 - 35. Nayman A, Guler I, Keskin S, et al. A novel modified PAIR technique using a trocar catheter for percutaneous treatment of liver hydatid cysts: a six-year experience. *Diagn Interv Radiol.* 2016;22(1):47-51.
 - 36. Neumayr A, Troia G, de Bernardis C, et al. Justified concern or exaggerated fear: the risk of anaphylaxis in percutaneous treatment of cystic echinococcosis-a systematic literature review. *PLoS Negl Trop Dis* 2011; 5:1154.
 - 37. Sharma BC, Reddy RS, Garg V. Endoscopic management of hepatic hydatid cyst with biliary communication. *Dig Endosc.* 2012;24(4):267-270.
 - 38. Dolay K, Akbulut S. Role of endoscopic retrograde cholangiopancreatography in the management of hepatic hydatid disease. *World J Gastroenterol.* 2014;20(41):15253-15261.
 - 39. Safioleas MC, Misiakos EP, Kouvaraki M, et al. Hydatid disease of the liver. A continuing surgical problem. *Arch Surg* 2006;141:1101– 8.
 - 40. Kayaalp C, Balkan M, Aydin C, et al. Hypertonic saline in hydatid disease. *World J Surg.* 2001 Aug;25(8):975-979.
 - 41. Besim H, Karayalçın K, Hamamci O, et al. Scolicidal agents in hydatid cyst surgery. *HPB Surg.* 1998;10(6):347-351.
 - 42. Manterola C, Otzen T. Surgical alternatives used in the treatment of liver hydatid cyst. A systematized approach based on evidence (an overview). *Int. J. Morphol.* 2016, 34(2):699-707.
 - 43. Sahin M, Ece I. Karaciğer Kist Hidatiklerinde Cerrahinin Temel Prensipleri. *Turkiye Klinikleri J Gen Surg-Special Topics* 2016;9(4):28-35.
 - 44. Pang Q, Jin H, Man Z, et al. Radical versus conservative surgical treatment of liver hydatid cysts: a meta-analysis. *Front Med.* 2018;12(3):350-359.
 - 45. Polat C, Civak T. Hepatik rezeksiyonlar. *Turkiye Klinikleri J Gen Surg-Special Topics* 2016;9(4):36-44.
 - 46. Kaya C, Demir U, Omeroglu S, et al. Peristikstomi. *Turkiye Klinikleri J Gen Surg-Special Topics* 2016;9(4):53-5.
 - 47. Ramia JM, Serrablo A, Serradilla M, et al. Major hepatectomies in liver cystic echinococcosis: A bi-centric experience. Retrospective cohort study. *Int J Surg.* 2018 Jun;54(Pt A):182-186.
 - 48. Martel G, Ismail S, Bégin A, et al. Surgical management of symptomatic hydatid liver disease: experience from a Western centre. *Can J Surg.* 2014;57(5):320-326.
 - 49. Georgiou GK, Lianos GD, Lazaros A, et al. Surgical management of hydatid liver disease. *Int J Surg.* 2015;20:118-122.
 - 50. Katkhouda N, Fabiani P, Benizri E, et al. Laser resection of a liver hydatid cyst under videolaparoscopy. *Br J Surg* 1992;79:560-561.
 - 51. Yilmaz H, Ece İ. Karaciğer kist hidatiklerinde laparoskopik girişimler. *Turkiye Klinikleri J Gen Surg-Special Topics* 2016;9(4):56-9.
 - 52. Bayrak M, Altintas Y. Current approaches in the surgical treatment of liver hydatid disease: single center experience. *BMC Surg.* 2019;19(1):95.
 - 53. Manterola C, Otzen T. Surgical alternatives used in the treatment of liver hydatid cyst: A systematized approach based on evidence (an overview). *Int J Morphol* 2016; 34: 699- 707.
 - 54. Zaharie F, Bartos D, Mocan L, et al. Open or laparoscopic treatment for hydatid disease of the liver? A 10-year single-institution experience. *Surg Endosc* 2013;27:2110–6.
 - 55. Sokouti M, Sadeghi R, Pashazadeh S, et al. A systematic review and meta-analysis on the treatment of liver hydatid cyst: Comparing laparoscopic and open surgeries. *Arab J Gastroenterol.* 2017;18(3):127-135.
 - 56. Zaharie F, Bartos D, Mocan L, et al. Open or laparoscopic treatment for hydatid disease of the liver? A 10-year single-institution experience. *Surg Endosc.* 2013;27(6):2110-2116.
 - 57. Tuxun T, Zhang JH, Zhao JM, et al. World review of laparoscopic treatment of liver cystic echinococcosis-914 patients. *Int J Infect Dis.* 2014;24:43-50.
 - 58. Greco S, Cannella R, Giambelluca D, et al. Complications of hepatic echinococcosis: multimodality imaging approach. *Insights Imaging.* 2019;10(1):113.

59. Saylam B, Coşkun F, Demiriz B, et al. A new and simple score for predicting cystobiliary fistula in patients with hepatic hydatid cysts. *Surgery*. 2013;153(5):699-704.
60. Aday U, Kapan M, Onder A, et al. Liver Hydatid Cyst Associated With Biliary Tract: Is it An Important Complication Indicator? *Journal of Current Surgery* 2011;1(1):25-32.
61. Unalp HR, Baydar B, Kamer E, et al. Asymptomatic occult cysto-biliary communication without bile into cavity of the liver hydatid cyst: a pitfall in conservative surgery. *Int J Surg.* 2009;7(4):387-391.
62. El Nakeeb A, Salem A, El Sorogy M, et al. Cystobiliary communication in hepatic hydatid cyst: predictors and outcome. *Turk J Gastroenterol.* 2017;28(2):125-130.
63. Ozmen MM, Coskun F. New technique for finding the ruptured bile duct into the liver cysts: scope in the cave technique. *Surg Laparosc Endosc Percutan Tech.* 2002;12(3):187-189.
64. Ulualp KM, Aydemir I, Senturk H, et al. Management of intrabiliary rupture of hydatid cyst of the liver. *World J Surg.* 1995;19(5):720-728.
65. Demircan O, Baymus M, Seydaoglu G, et al. Occult cystobiliary communication presenting as postoperative biliary leakage after hydatid liver surgery: Are there significant preoperative clinical predictors? *Canadian Journal of Surgery.* 2006; 49 :177-184.
66. Lopez-Marcano AJ, Ramia JM, Arteaga V, et al. Percutaneous drainage as a first therapeutic step prior to surgery in liver hydatid cyst abscess: Is it worth it?. *World J Hepatol.* 2017;9(2):114-118.
67. Prousalidis J, Kosmidis C, Anthimidis G, et al. Forty-four years' experience (1963-2006) in the management of primarily infected hydatid cyst of the liver. *HPB (Oxford).* 2008;10(1):18-24.
68. Lopez-Marcano AJ, Ramia JM, Arteaga V, et al. Percutaneous drainage as a first therapeutic step prior to surgery in liver hydatid cyst abscess: Is it worth it?. *World J Hepatol.* 2017;9(2):114-118.
69. Manterola C, Urrutia S; MINCIR GROUP. Infected Hepatic Echinococcosis: Results of Surgical Treatment of a Consecutive Series of Patients. *Surg Infect (Larchmt).* 2015;16(5):553-557.
70. Sabzevari S, Badirzadeh A, Shahkaram R, et al. Traumatic rupture of liver hydatid cysts into the peritoneal cavity of an 11-year-old boy: a case report from Iran. *Rev Soc Bras Med Trop.* 2017;50(6):864-867.
71. Akcan A, Akyıldız H, Artıç T, et al. Peritoneal perforation of liver hydatid cysts: clinical presentation, predisposing factors, and surgical outcome. *World J Surg* 2007;31(6):1286-1293.
72. Majbar AM, Aalala M, Elalaoui M, et al. Asymptomatic intra-peritoneal rupture of hydatid cyst of the liver: case report. *BMC Res Notes.* 2014;7:114.
73. Yilmaz M, Akbulut S, Kahraman A, et al. Liver hydatid cyst rupture into the peritoneal cavity after abdominal trauma: case report and literature review. *Int Surg.* 2012;97(3):239-244.
74. Gelincik A, Ozseker F, Büyüköztürk S, et al. Recurrent anaphylaxis due to non-ruptured hepatic hydatid cysts. *Int Arch Allergy Immunol.* 2007;143(4):296-298.
75. Yilmaz I, Aydin O, Okoh A, et al. Late onset anaphylaxis in a hydatid cyst case presenting with chronic urticaria. *Case Rep Med.* 2013;2013:658393.
76. Korwar V, Subhas G, Gaddikeri P, et al. Hydatid disease presenting as cutaneous fistula: review of a rare clinical presentation. *Int Surg.* 2011;96(1):69-73.
77. Cicero G, Blandino A, Ascenti G, et al. Superinfection of a Dead Hepatic Echinococcal Cyst with a Cutaneous Fistulization. *Case Rep Radiol.* 2017;2017:9393462.
78. Akay S, Erkan N, Yildirim M, et al. Development of a cutaneous fistula following hepatic cystic echinococcosis. *Springerplus.* 2015;4:538.
79. Tekin A. Cerrahi komplikasyonları ve yönetimi. *Turkiye Klinikleri J Gen Surg-Special Topics* 2016;9(4):65-68.
80. Kapan S, Goksoy E, et al. Postoperative recurrence in hepatic hydatid disease. *J Gastrointest Surg.* 2006;10(5):734-739.
81. Velasco-Tirado V, Romero-Alegría Á, Bellassen-García M, et al. Recurrence of cystic echinococcosis in an endemic area: a retrospective study. *BMC Infect Dis.* 2017;17(1):455.