



## BÖLÜM 23

### Safra Yolları Kanserlerinde Tanı ve Cerrahi

İbrahim ÖNER<sup>1</sup>  
Baki EKÇİ<sup>2</sup>

#### Giriş

Kolanjiokarsinom nadir bir tümördür. GİS kanserlerinde %3 oranındadır. Erkeklerde sıklığı kadınlardan fazladır (1:1,2-1,5). Asyalılar (özellikle güneydoğu Asya) beyazlardan ve siyahlardan neredeyse 2 kat daha fazla etkilenir. Genellikle orta ve ileri yaştaki bireyleri etkiler. Kolanjiokarsinomlu hastaların çoğunluğu bilinen veya şüphelenilen risk faktörlerinden herhangi birine sahip değildir ve çoğu ileri evre hastalık ile başvurur (1-3).

Kolanjiokarsinom, biliyer kanal epitelinden köken alan, agresif davranışlı ve kötü prognozlu bir malign neoplazmdir. Safra yolu epitelinden kaynaklanan adenokarsinomların genel adıdır. Safra kesesi ve Ampulla Vater dışında kalan intrahepatik, perihiler veya ekstrahepatik (distal) safra yollarından köken alan kanserler kolanjiokarsinom olarak adlandırılır. Ekstrahepatik kolanjiokarsinom

(EKK), perihiler ve distal kolanjiokarsinomu içerir (1-3).

Kolanjiokarsinomların yaklaşık %5-10'u intrahepatiktir ve karaciğer parankimindeki periferik safra kanallarından ya da hepatik kanalların sağ ve sol kısımlarının birleşme yerinin proksimal kısmının intrahepatik kanallarından kaynaklanır. Karaciğerin primer tümörleri gibi tedavi edilir. Rezektabl intrahepatik kolanjiokarsinomlu hastaların %40'ından azı 5 yıldan fazla hayatı kalırken, rezeke edilemeyen hastalığı olanlar tipik olarak 12 aydan daha az hayatı kalırlar (1-4).

Perihiler kolanjiokarsinom tüm kolanjiokarsinomların %60-80'inden sorumludur. Periduktal infiltre tip kolanjiokarsinom en yaygın morfolojik tiptir. Klaskin tümörleri, ortak hepatik kanal bifurkasyonunu tutan tümörlerdir. Perihiler kolanjiokarsinom için Bismuth-Corlette sistemi; sınıflama, safra yollarına tümörün yerleşimine göre seviye ve yaygınlığı hakkında bilgi verir (2, 4).

<sup>1</sup> Uzman Dr, Mersin Şehir Eğt. Arş. Hastanesi, Genel Cerrahi Servisi, Dr.oner@hotmail.com

<sup>2</sup> Prof. Dr, Haliç Üniversitesi. Tip Fakültesi, Genel Cerrahi AD, drbaki@yahoo.com

## Kaynaklar

1. Tyson GL, El-Serag HB. Risk factors for cholangiocarcinoma. *Hepatology*. 2011;54:173-184.
2. Blehacz B. Cholangiocarcinoma: Current knowledge and new developments. *Gut Liver*. 2017;11:13-26.
3. Khan SA, Emadossadat S, Ladep NG, et al. Rising trends in cholangiocarcinoma: is the ICD classification system misleading us? *J Hepatol*. 2012;56:848-854.
4. Bismuth H, Nakache R, Diamond T. Management strategies in resection for hilar cholangiocarcinoma. *Ann Surg*. 1992;215(1):31-38.
5. Esnaola NF, Meyer JE, Karachristos A, et al. Evaluation and Management of Intrahepatic and Extrahepatic Cholangiocarcinoma. *Cancer*. 2016;122(9):1349-1369.
6. Labib PL, Goodchild G, Pereira SP. Molecular Pathogenesis of Cholangiocarcinoma. *BMC Cancer*. 2019;19(1):185.
7. Khan AS, Dageforde LA. Cholangiocarcinoma. *Surg Clin North Am*. 2019;99(2):315-335.
8. Lutz HH, Trautwein C, Tischendorf JJW. Primary sclerosing cholangitis diagnosis and treatment. *Dtsch Arztebl Int*. 2013;110(51-52):867-874.
9. Ehlken H, Zenouzi R, Schramm C. Risk of cholangiocarcinoma in patients with primary sclerosing cholangitis: diagnosis and surveillance. *Curr Opin Gastroenterol*. 2017;33(2):78-84.
10. Chapman R, Fevery J, Kalloo A, et al. Diagnosis and management of primary sclerosing cholangitis. *Hepatology*. 2010;51(2):660-678.
11. Sripa B, Kaewkes S, Sithithaworn P, et al. Liver Fluke Induces Cholangiocarcinoma. *PLoS Med*. 2007;4(7):e201.
12. Watanapa P, Watanapa WB. Liver fluke-associated cholangiocarcinoma. *Br J Surg*. 2002;89(8):962-970.
13. Kendall T, Verheij J, Gaudio E, et al. Anatomical, histomorphological and molecular classification of cholangiocarcinoma. *Liver Int*. 2019;39(Suppl. 1):7-18.
14. Kodali S, Shetty A, Shekhar S, et al. Management of Intrahepatic Cholangiocarcinoma. *J Clin Med*. 2021;10(11):2368.
15. Bloom CM, Langer B, Wilson SR. Role of US in the detection, characterization, and staging of cholangiocarcinoma. *Radiographics*. 1999;19(5):1199-1218.
16. Vilgrain V. Staging cholangiocarcinoma by imaging studies. *HPB (Oxford)*. 2008;10(2):106-109.
17. Joo I, Lee JM, Yoon JH. Imaging diagnosis of intrahepatic and perihilar cholangiocarcinoma: Recent advances and challenges. *Radiology*. 2018;288(1):7-13.
18. Aljifry M, Abdulelah A, Walsh M, et al. Evidence-based approach to cholangiocarcinoma: a systematic review of the current literature. *J Am Coll Surg*. 2009;208(1):134-147.
19. Kiefer LS, Sekler J, Gückel B, et al. Impact of 18 F-FDG-PET/CT on Clinical Management in Patients with Cholangiocellular Carcinoma. *BJR Open*. 2021;3(1):20210008.
20. Jarnagin WR, Fong Y, DeMatteo RP, et al. Staging, resectability and outcome in 225 patients with hilar cholangiocarcinoma. *Ann Surg*. 2001;234(4):507-519.
21. Cherqui D, Benoit S, Malassagne B, et al. Major liver resection for carcinoma in jaundiced patients without preoperative biliary drainage. *Arch Surg*. 2000;135(3):302-308.
22. Mehrabi A, Khajeh E, Ghamarnejad O, et al. Corrigendum to "Meta-analysis of the efficacy of preoperative biliary drainage in patients undergoing liver resection for perihilar cholangiocarcinoma" [Eur. J. Radiol. 125 (2020) 108897]. *Eur J Radiol*. 2020 Jul;128:109004.
23. Rassam F, Roos E, van Lienden KP, et al. Modern work-up and extended resection in perihilar cholangiocarcinoma: the AMC experience. *Langenbecks Arch Surg*. 2018;403(3):289-307.
24. Tang Z, Yang Y, Meng W, et al. Best option for preoperative biliary drainage in Klatskin tumor: a systematic review and meta-analysis. *Medicine (Baltimore)*. 2017;96(43):e8372.
25. Kim KM, Park JW, Lee JK, et al. A Comparison of Preoperative Biliary Drainage Methods for Perihilar Cholangiocarcinoma: Endoscopic versus Percutaneous Transhepatic Biliary Drainage. *Gut Liver*. 2015;9(6):791-799.
26. Wiggers JK, Coelen RJ, Rauws EA, et al. Preoperative endoscopic versus percutaneous transhepatic biliary drainage in potentially resectable perihilar cholangiocarcinoma (DRAINAGE trial): design and rationale of a randomized controlled trial. *BMC Gastroenterol*. 2015;15:20.
27. Hwang S, Song GW, Ha TY, et al. Reappraisal of percutaneous transhepatic biliary drainage tract recurrence after resection of perihilar bile duct cancer. *World J Surg*. 2012;36(2): 379-385.
28. Chin MW, Byrne MF. Update of cholangioscopy and biliary strictures. *World J Gastroenterol*. 2011;17(34):3864-3869.
29. Matsuo K, Rocha FG, Ito K, et al. The Blumgart preoperative staging system for hilar cholangiocarcinoma: analysis of resectability and outcomes in 380 patients. *J Am Coll Surg*. 2012;215(3):343-355.
30. Zaydfudim VM, Clark CJ, Kendrick ML, et al. Correlation of staging systems to survival in patients with resected hilar cholangiocarcinoma. *Am J Surg*. 2013;206(2):159-165.
31. Ali SM, Clark CJ, Mounajjid T, et al. Model to predict survival after surgical resection of intrahepatic cholangiocarcinoma: the Mayo Clinic experience. *HPB(Oxford)*. 2015;17(3):244-250.
32. Roos E, Hubers LM, Coelen RJS, et al. IgG4-Associated Cholangitis in Patients Resected for Presumed Perihilar Cholangiocarcinoma: a 30-Year Tertiary Care Experience. *Am J Gastroenterol*. 2018;113(5):765-772.
33. Kamisawa T, Nakazawa T, Tazuma S, et al. Clinical practice guidelines for IgG4-related sclerosing cholangitis. *J Hepatobiliary Pancreat Sci*. 2019;26(1):9-42.
34. Victor DW, Sherman S, Karakan T, et al. Current endoscopic approach to indeterminate biliary strictures. *World J Gastroenterol*. 2012;18(43):6197-6205.
35. Gaspersz MP, Buettner S, van Vugt JLA, et al. Conditional survival in patients with unresectable perihilar cholangiocarcinoma. *HPB*. 2017;19:966-971.

36. Lewis HL, Rahnemai-Azar AA, Dillhoff M, et al. Current Management of Perihilar Cholangiocarcinoma and Future Perspectives. *Chirurgia (Bucur)*. 2017;112(3):193-207.
37. Mansour JC, Aloia TA, Crane CH, et al. Hilar cholangiocarcinoma: expert consensus statement. *HPB (Oxford)*. 2015;17(8):691-699.
38. Kobayashi A, Miwa S, Nakata T, et al. Disease recurrence patterns after R0 resection of hilar cholangiocarcinoma. *Br J Surg*. 2010;97:56-64.
39. Rea DJ, Munoz-Juarez M, Farnell MB, et al. Major hepatic resection for hilar cholangiocarcinoma: analysis of 46 patients. *Arch Surg*. 2004; 139:514-523; discussion 523-525.
40. Nagino M, Ebata T, Yokoyama Y, et al. Evolution of surgical treatment for perihilar cholangiocarcinoma: a single-center 34-year review of 574 consecutive resections. *Ann Surg*. 2013;258(1):129-140.
41. Uchiyama K, Nakai T, Tani M, et al. Indications for extended hepatectomy in the management of stage IV hilar cholangiocarcinoma. *Arch Surg*. 2003;138(9):1012-1016.
42. Jonas S, Benckert C, Thelen A, et al. Radical surgery for hilar cholangiocarcinoma. *Eur J Surg Oncol*. 2008;34(3):263-271.
43. Mizumoto R, Kawarada Y, Suzuki H. Surgical treatment of hilar carcinoma of the bile duct. *Surg Gynecol Obstet*. 1986;162(2):153-162.
44. Squadrone M, Tondulli L, Gatta G, et al. Cholangiocarcinoma. *Crit Rev Oncol Hematol*. 2017;116:11-31.
45. Cheng QB, Yi B, Wang J-H, et al. Resection with total caudate lobectomy confers survival benefit in hilar cholangiocarcinoma of Bismuth type III and IV. *Eur J Surg Oncol*. 2012;38(12):1197-1203.
46. Dinant S, Gerhards MF, Busch OR, et al. The importance of complete excision of the caudate lobe in resection of hilar cholangiocarcinoma. *HPB (Oxford)*. 2005;7(4):263-267.
47. Ito F, Cho CS, Rikkers LF, et al. Hilar cholangiocarcinoma: current management. *Ann Surg*. 2009; 250(2):210-218.
48. Ebata T, Nagino M, Kamiya J, et al. Hepatectomy with portal vein resection for hilar cholangiocarcinoma: An audit of 52 consecutive cases. *Ann Surg*. 2003; 238(5):720-727.
49. Igami T, Nishio H, Ebata T, et al. Surgical treatment of hilar cholangiocarcinoma in the "new era": the Nagoya University experience. *J Hepatobiliary Pancreat Sci*. 2010;17(4):449-454.
50. Lyu S, Li L, Zhao X, et al. Prognostic impact of lymph node parameters in distal cholangiocarcinoma after pancreateo-coduodenectomy. *World J Surg Oncol*. 2020;18(1):262.
51. Li J, Zhou MH, Ma WJ, et al. Extended lymphadenectomy in hilar cholangiocarcinoma: What it will bring? *World J Gastroenterol*. 2020;26(24):3318-3325.
52. Conci S, Ruzzenente A, Sandri M, et al. What is the most accurate lymph node staging method for perihilar cholangiocarcinoma? Comparison of UICC/AJCC pN stage, number of metastatic lymph nodes, lymph node ratio, and log odds of metastatic lymph nodes. *Eur J Surg Oncol*. 2017;43(4):743-750.
53. Cho AH, Yamamoto H, Kainuma O, et al. Laparoscopy in the management of hilar cholangiocarcinoma. *World J Gastroenterol*. 2014;20(41):15153-15157.
54. Coelen RJ, Ruys AT, Besselink MG, et al. Diagnostic accuracy of staging laparoscopy for detecting metastasized or locally advanced perihilar cholangiocarcinoma: a systematic review and meta-analysis. *Surg Endosc*. 2016;30(10):4163-4173.
55. Arumugam P, Balarajah V, Watt J, et al. Role of laparoscopy in hepatobiliary malignancies. *Indian J Med Res*. 2016;143(4):414-419.
56. Barlow AD, Garcea G, Berry DP, et al. Staging laparoscopy for hilar cholangiocarcinoma in 100 patients. *Langenbecks Arch Surg*. 2013;398(7):983-988.
57. Chen Y, Xu Y, Zhang Y. Current status of laparoscopic radical hilar cholangiocarcinoma in Mainland China. *Biosci Trends*. 2020;14(3):168-173.
58. Levi Sandri GB, Spoletilini G, Mascianà G, et al. The role of minimally invasive surgery in the treatment of cholangiocarcinoma. *Eur J Surg Oncol*. 2017;43(9):1617-1621.
59. Rotellar F, Pardo F. Laparoscopic staging in hilar cholangiocarcinoma: is it still justified? *World J Gastrointest Oncol*. 2013;5(7):127-131.
60. Rizvi S, Gores GJ. Pathogenesis, diagnosis, and management of cholangiocarcinoma. *Gastroenterology*. 2013;145(6):1215-1229.
61. Khan SA, Davidson BR, Goldin R, et al. Guidelines for the diagnosis and treatment of cholangiocarcinoma: consensus document. *Gut*. 2002;51(suppl 6):VI1-VI9.
62. Waseem D, Tushar P. Intrahepatic, perihilar and distal cholangiocarcinoma: Management and outcomes. *Ann Hepatol*. 2017;16(1):133-139.
63. Buettner S, van Vugt JLA, Gaspersz MP, et al. Survival after resection of perihilar cholangiocarcinoma in patients with lymph node metastases. *HPB*. 2017;19:735-740.
64. Figueras J, Llado L, Valls C, et al. Changing strategies in diagnosis and management of hilar cholangiocarcinoma. *Liver Transpl*. 2000;6:786-794.
65. Chapman WC, Sharp KW, Weaver F, et al. Tumor seeding from percutaneous biliary catheters. *Ann Surg*. 1989;209:708-713; discussion 713-715.
66. Sarmiento JM, Nagorney DM. Hepatic resection in the treatment of perihilar cholangiocarcinoma. *Surg Oncol Clin N Am*. 2002;11:893-908, viii-ix.
67. Tringali A, Boškoski I, Costamagna G. Endoscopic Stenting in Hilar Cholangiocarcinoma: When, How, and How Much to Drain? *Gastroenterol Res Pract*. 2019;2019:5161350.
68. Banales JM, Cardinale V, Carpino G, et al. Expert consensus document: Cholangiocarcinoma: current knowledge and future perspectives consensus statement from the European Network for the Study of Cholangiocarcinoma (ENS-CCA). *Nat Rev Gastroenterol Hepatol*. 2016;13(5):261-280.

69. Goenka MK, Goenka U. Palliation: Hilar cholangiocarcinoma. *World J Hepatol.* 2014;6(8):559-569.
70. Schiavon LL, Ejima FH, Menezes MR, et al. Recommendations For Invasive Procedures In Patients With Diseases Of The Liver And Biliary Tract: Report Of A Joint Meeting Of The Brazilian Society Of Hepatology (Sbh), Brazilian Society Of Digestive Endoscopy (Sobed) And Brazilian Society Of Interventional Radiology And Endovascular Surgery (Sobrice). *Arq Gastroenterol.* 2019;56(2):213-231.
71. Almadi MA, Barkun A, Martel M. Plastic vs. Self-Expandable Metal Stents for Palliation in Malignant Biliary Obstruction: A Series of Meta-Analyses. *Am J Gastroenterol.* 2017;112:260-273.
72. Boulay BR, Birg A. Malignant biliary obstruction: From palliation to treatment. *World J Gastrointest Oncol.* 2016;8:498-508.
73. Moss AC, Morris E, Leyden J, et al. Do the benefits of metal stents justify the costs? A systematic review and meta-analysis of trials comparing endoscopic stents for malignant biliary obstruction. *Eur J Gastroenterol Hepatol.* 2007;19:1119-1124.
74. House MG, Choti MA. Palliative therapy for pancreatic/biliary cancer. *Surg Oncol Clin N Am.* 2004;13:491-503, ix.
75. Patel T. Cholangiocarcinoma. *Nat Clin Pract Gastroenterol Hepatol.* 2006;3:33-42.
76. Prat F, Chaput O, Ducot B, et al. Predictive factors for survival of patients with inoperable malignant distal biliary strictures: a practical management guideline. *Gut.* 1998;42:76-80.
77. Perdue DG, Freeman ML, DiSario JA, et al. Plastic versus self-expanding metallic stents for malignant hilar biliary obstruction: a prospective multicenter observational cohort study. *J Clin Gastroenterol.* 2008;42:1040-1046.
78. Raju RP, Jaganmohan SR, Ross WA, et al. Optimum palliation of inoperable hilar cholangiocarcinoma: comparative assessment of the efficacy of plastic and self-expanding metal stents. *Dig Dis Sci.* 2011;56:1557-1564.
79. Jarnagin WR, Shoup M. Surgical management of cholangiocarcinoma. *Semin Liver Dis.* 2004;24:189-199.
80. Lai EC, Tang CN. Robot-assisted laparoscopic hepaticojejunostomy for advanced malignant biliary obstruction. *Asian J Surg.* 2015;38(4):210-213.
81. Kim JH, Kim M, Sung CW, et al. High-dose fentanyl patch for cancer pain of a patient with cholangiocarcinoma. *Korean J Intern Med.* 2010;25(3):337-340.
82. Kornick CA, Santiago-Palma J, Schulman G, et al. A safe and effective method for converting patients from transdermal to intravenous fentanyl for the treatment of acute cancer-related pain. *Cancer.* 2003;97(12):3121-3124.
83. Kornick CA, Santiago-Palma J, Khojainova N, et al. A safe and effective method for converting cancer patients from intravenous to transdermal fentanyl. *Cancer.* 2001;92(12):3056-3061.