



Bölüm 22

Rektum Kanseri

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Epidemiyoloji ve Risk Faktörleri

Kolorektal kanser en yaygın üçüncü kanserdir. Kanserden ölümlerde erkekte ikinci kadında üçüncü sırada yer almaktadır. En yüksek insidanslar Kuzey Amerika, Avustralya, Kuzey ve Batı Avrupa'da iken gelişmekte olan ülkelerde özellikle Asya ve Afrika'da düşük oranlar vardır (1). Bu coğrafi farklılık diyete, çevresel maruziyete ve genetik yatkınlığa bağlı gibi gözükmektedir. Rektal kanserler, kolorektal kanserlerin yaklaşık üçte birini oluşturur (2).

Kolorektal kanserlerin sporadik gelişimi için en büyük risk faktörü yaştır. 40 yaşın altında nadirken, 40-50 yaştan sonra insidans artmaya başlamaktadır. 50 yaş üstü özellikle erkeklerde daha sık görülür. Diğer yandan özellikle rektal kanserlerin erken yaşlarda görülme sıklığı artmaktadır (1).

Etyolojide genetik faktörler, premalign lezyonlar ve beslenme şeklinin etkisi gösterilmiştir (3).

Kolorektal kanserlerin çoğu sporadiktir. Hastaların %5'inde herediter non-polipozis kolorektal kanser (Lynch 1 ve 2) veya familial adenomatöz polipozis (Gardner, Turcot, Peutz-Jeghers sendromu) sendromları eşlik eder. Sıklığın artmasına neden olan bazı faktörler; ülseratif kolit veya Crohn hastası olması, kolonda polip ya da adenom öyküsü olması, ailede kolorektal kanser veya polipozis öykü olması şeklinde özetlenebilir. Aynı zamanda özellikle kırmızı et, yağlı yiyecekler ve lifsiz besinlerin ağırlıklı olduğu ya da, antioksidan ve eser elementten yoksun diyet, sigara, alkol kullanımı, fiziksel aktivite azlığı da çevresel risk faktörlerini oluşturur (1,3).

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Tanı

Tanısal çalışmalar anamnez ile başlar; fizik muayene, laboratuvar, endoskopik ve radyolojik incelemeleri kapsar. Fizik muayene erkeklerde parmakla rektal tuşe ve kadınlarda rektovajinal tuşe ile pelvik muayeneyi içerir. Laboratuvar tetkikleri arasında yapılan gaitada gizli kan aranması basit ve değerli bir incelemedir. Tam kan sayımında anemi görülebilir.

Tanıda en güvenilir yöntem dijital rektal muayene (DRE) ile rektum ve kolonun endoskopik incelenmesidir. Senkron tümör ya da polip

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Kaynaklar

1. Arnold M, Sierra MS, Laversanne M, ve ark. Global patterns and trends in colorectal cancer incidence and mortality. *Gut*. 2017 Apr;66(4):683-691.
2. American Cancer Society. Cancer Facts & Figures 2020. American Cancer Society. Cancer Statistics 2020 <https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2020/leading-sites-of-new-cancer-cases-and-deaths-2020.pdf>. Giriş tarihi 5 Nisan 2021.
3. Simon K. Colorectal cancer development and advances in screening *Clin Interv Aging*. 2016 Jul 19;11:967-76.
4. Califano JL, WM; Nehal, KS, ve ark. AJCC Cancer Staging Manual. In: Amin ME, S; Greene, F ve ark, ed. American Joint Committee on Cancer Staging Manual, Eighth Edition. 8th Edition ed.: Springer International Publishing; 2018:178- 179.
5. Society AR. MRI Primary Rectal Cancer Staging Template - SAR Rectal/Anal Cancer DFP 2019. In. Rectal and Anal Cancer DFP. IL: Society of Abdominal Radiology; 2019.
6. Folkesson J, Birgisson H, Pahlman L, ve ark. Swedish Rectal Cancer Trial: long lasting benefits from radiotherapy on survival and local recurrence rate. *J Clin Oncol*. 2005 Aug 20;23(24):5644-50.
7. Roh MS, Colangelo LH, O'Connell MJ, ve ark. Preoperative multimodality therapy improves disease-free survival in patients with carcinoma of the rectum: NSABP R-03. *J Clin Oncol*. 2009 Nov 1;27(31):5124-30.
8. Sauer R, Liersch T, Merkel S, ve ark. Preoperative versus postoperative chemoradiotherapy for locally advanced rectal cancer: Results of the German CAO/ARO/AIO-94 randomized phase III trial after a median follow-up of 11 years. *J Clin Oncol*. 2012 Jun 1;30(16):1926-33.
9. Sebag-Montefiore D, Stephens RJ, Steele R, ve ark. Preoperative radiotherapy versus selective postoperative chemoradiotherapy in patients with rectal cancer (MRC CR07 and NCIC-CTG C016): a multicentre, randomised trial. *Lancet*. 2009 Mar 7;373(9666):811-20.
10. Van Gijn W, Marijnen CAM, Nagtegaal ID, ve ark. Preoperative radiotherapy combined with total mesorectal excision for resectable rectal cancer: 12-year follow-up of the multicentre, randomised controlled TME trial. *The Lancet Oncology*. 2011;12(6):575-582.
11. Rullier E, Denost Q, Vendrely V, ve ark. Low rectal cancer: classification and standardization of surgery. *Dis Colon Rectum*. 2013;May;56(5):560-7.
12. Knol J, Keller DS. Total Mesorectal Excision Technique-Past, Present, and Future. *Clin Colon Rectal Surg*. 2020 May;33(3):134-143.
13. Steele GD Jr, Herndon JE, Bleday R, ve ark. Sphincter sparing treatment for distal rectal adenocarcinoma. *Ann Surg Oncol* 1999 Jul-Aug; 6(5):433-41.
14. Greenberg JA, Shibata D, Herndon JE 2nd, ve ark. Local excision of distal rectal cancer: an update of cancer and leukemia group B 8984. 2008 Aug;51(8):1185-91.
15. Russell A, Harris J, Rosenberg PJ, ve ark. Anal sphincter conservation for patients with adenocarcinoma of the distal rectum: long-term results of radiation therapy oncology group protocol 89-02. *Int J Radiat Oncol Biol Phys*.2000 Jan 15;46(2):313-22.
16. Fisher B, Wolmark N, Rockette H,ve ark. Postoperative adjuvant chemotherapy or radiation therapy for rectal cancer: results from NSABP protocol R-01. *J Natl Cancer Inst*.1988 Mar;80(1):21-9.
17. Gastrointestinal Tumor Study Group. Prolongation of the disease free interval in surgically treated rectal carcinoma. *N Engl J Med*. 1985;312:1465-72.
18. Krook JE, Moertel CG, Gunderson LL, ve ark. Effective surgical adjuvant therapy for high-risk rectal carcinoma. *N Engl J Med*. 1991 Mar 14;324(11):709-15.
19. O'Connell MJ, Martenson JA, Wieand HS, ve ark. Improving adjuvant therapy for rectal cancer by combining protracted-infusion fluorouracil with radiation therapy after curative surgery. *N Engl J Med* 1994 Aug 25;331(8):502-7.
20. Kapiteijn E, Marijnen CA, Nagtegaal ID, ve ark. Preoperative radiotherapy combined with total mesorectal excision for resectable rectal cancer. *N Engl J Med* 2001 Aug 30;345(9):638-46.
21. Sauer R, Fietkau R, Wittekind C,ve ark. Adjuvant vs. neoadjuvant radiochemotherapy for locally advanced rectal cancer: the German trial CAO/ARO/AIO-94. *Colorectal Dis* 2003 Sep;5(5):406-15.
22. Song JH, Jeong JU, Lee JH, ve ark. Preoperative chemoradiotherapy versus postoperative chemoradiotherapy for stage II-III resectable rectal cancer: a meta-analysis of randomized controlled trials. *Radiat Oncol J*. 2017 Sep;35(3):198-207.
23. Gérard JP, Conroy T, Bonnetain F,ve ark. Preoperative radiotherapy with or without concurrent fluorouracil and leucovorin in T3-4 rectal cancers: results of

- FFCD 9203. *J Clin Oncol* 2006 Oct 1;24(28):4620-5.
24. Bosset JF, Calais G, Mineur L, ve ark. Fluorouracil-based adjuvant chemotherapy after preoperative chemoradiotherapy in rectal cancer: long-term results of the EORTC 22921 randomised study. *Lancet Oncol* 2014 Feb;15(2):184-90.
 25. De Caluwe L, Van Nieuwenhove Y, Ceelen WP. Preoperative chemoradiation versus radiation alone for stage II and III resectable rectal cancer. *Cochrane Database Syst Rev* 2013 Feb 28;(2):CD006041.
 26. Fiorica F, Cartei F, Licata A, ve ark. Can chemotherapy concomitantly delivered with radiotherapy improve survival of patients with resectable rectal cancer? A meta-analysis of literature data. *Cancer Treat Rev*. 2010 Nov;36(7):539-49.
 27. Bujko K, Michalski W, Kepka L, ve ark. Association between pathologic response in metastatic lymph nodes after preoperative chemoradiotherapy and risk of distant metastases in rectal cancer: An analysis of outcomes in a randomized trial. *Int J Radiat Oncol Biol Phys* 2007 Feb 1;67(2):369-77.
 28. Ngan SY, Burmeister B, Fisher RJ, ve ark. Randomized trial of short-course radiotherapy versus long-course chemoradiation comparing rates of local recurrence in patients with T3 rectal cancer: Trans-Tasman Radiation Oncology Group Trial 01.04. *J Clin Oncol*. 2012 Nov 1;30(31):3827-33.
 29. Francois Y, Nemoz CJ, Baulieux J, ve ark. Influence of the interval between preoperative radiation therapy and surgery on downstaging and on the rate of sphincter-sparing surgery for rectal cancer: the Lyon R90-01 randomized trial. *J Clin Oncol* 1999 Aug;17(8):2396.
 30. Petrelli F, Sgroi G, Sarti E, ve ark. Increasing the Interval Between Neoadjuvant Chemoradiotherapy and Surgery in Rectal Cancer: A meta-analysis of published studies. *Ann Surg* 2016 Mar;263(3):458-64.
 31. Erlandsson J, Holm T, Pettersson D, ve ark. Optimal fractionation of preoperative radiotherapy and timing to surgery for rectal cancer (Stockholm III): a multicentre, randomised, non-blinded, phase 3, non-inferiority trial. *Lancet Oncol* 2017 Mar;18(3):336-346.
 32. Garcia-Aguilar J, Patil S, Kim JK, ve ark. Preliminary results of the organ preservation of rectal adenocarcinoma (OPRA) trial. *J Clin Oncol*. 2020 May 1; 38:15_suppl, 4008
 33. Bahadoer RR, Dijkstra EA, van Etten B, ve ark. Short-course radiotherapy followed by chemotherapy before total mesorectal excision (TME) versus preoperative chemoradiotherapy, TME, and optional adjuvant chemotherapy in locally advanced rectal cancer (RAPIDO): a randomised, open-label, phase 3 trial. *Lancet Oncol* 2021 Jan;22(1):29-42.
 34. Conroy T, Bosset J, Etienne P, ve ark. Neoadjuvant chemotherapy with FOLFIRINOX and preoperative chemoradiotherapy for patients with locally advanced rectal cancer (UNICANCER-PRODIGE 23): a multicentre, randomised, open-label, phase 3 trial. *Lancet Oncol* 2021 May;22(5):702-715.
 35. Habr-Gama A, Perez RO, Nadalin W, ve ark. Operative versus nonoperative treatment for stage 0 distal rectal cancer following chemoradiation therapy: Long-term results. *Ann Surg*. 2004 Oct;240(4):711-7.
 36. Van der Valk MJM, Hilling DE, Bastiaannet E, ve ark. Long-term outcomes of clinical complete responders after neoadjuvant treatment for rectal cancer in the International Watch & Wait Database (IWWWD): An international multicentre registry study. *Lancet*. 2018 Jun 23;391(10139):2537-2545.
 37. Hong TS, Moughan J, Garofalo MC, ve ark. NRG Oncology Radiation Therapy Oncology Group 0822: A phase 2 study of preoperative chemoradiation therapy using intensity modulated radiation therapy in combination with capecitabine and oxaliplatin for patients with locally advanced rectal cancer. *Int J Radiat Oncol Biol Phys*. 2015 Sep 1;93(1):29-36.
 38. Wong SJ, Winter K, Meropol NJ, ve ark. Radiation Therapy Oncology Group 0247: a randomized Phase II study of neoadjuvant capecitabine and irinotecan or capecitabine and oxaliplatin with concurrent radiotherapy for patients with locally advanced rectal cancer. *Int J Radiat Oncol Biol Phys*. 2012 Mar 15;82(4):1367-75.
 39. Wee CW, Kang HC, Wu HG, ve ark. Intensity-modulated radiotherapy versus three-dimensional conformal radiotherapy in rectal cancer treated with neoadjuvant concurrent chemoradiation: a meta-analysis and pooled analysis of acute toxicity. *Jpn J Clin Oncol* 2018 May 1;48(5):458-66.