

Bölüm 7

İNTRAABDOMİNAL/ RETROPERİTONEAL YUMUŞAK DOKU SARKOMLARINDA RADYOTERAPİ

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GİRİŞ

Yumuşak doku sarkomları hemen hemen her anatomik bölgede ortaya çıkabilen, nadir görülen malign tümörlerin heterojen bir grubudur (1). Retroperitoneal yerleşim, tüm yumuşak doku sarkomlarının yaklaşık % 10-15'ini temsil eder (2,3). Çeşitli yaş gurubunda görülebilen retroperitoneal yumuşak doku sarkomlarının çoğunda hastalar 50'li yaşlarındadır. Erkek kadın oranı eşittir.

Anatomik yerleşimi nedeniyle retroperitoneal yumuşak doku sarkomlarının klinik semptomları genellikle nonspesifiktir ve tanı anında büyük bir tümör boyutu ile karakterize edilir. Genellikle 15-18 cm büyüklüğünde ağrısız, aşamalı olarak genişleyen bir kitle tanındaki en yaygın bulgulardandır (4). Retroperiton, çoklu yaşamsal yapılara sahip anatomik alanı temsil eder ve bu nedenle retroperitoneal yumuşak doku sarkomu, çeşitli terapötik zorluklarla ilişkilidir (5). Özellikle hayati yapılarla yakınlık, geniş rezeksiyon ile negatif cerrahi sınırları sağlayabilme olasılığını önemli ölçüde azaltabilir. Retroperitoneal boşluk sınırları şunlardır:

Üstte: Diafram, Altta: Pelvik diafram

Lateralde: Quadratus lumborum kasının lateral kenarı (Ancak 12. kaburga lateral kenarı da, transvers abdominis aponeurosis orijinine tekabül ettiği için lateral sınır için göz önünde bulundurulur.)

Önde: Kolon ve ince barsaklara bağlanan paryetal periton

Arkada: Karında psoas ve quadratus lumborumdan oluşan kas duvarı, pelviste iliakus, obturator internus ve piriformis kasları.

Hangi organlar bu boşlukta bulunmaktadır? Pankreas, böbrekler, surrenaller, ureterler.

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KAYNAKLAR

1. Ducimetiere F, Lurkin A, Ranchere-Vince D, et al. Incidence of sarcoma histotypes and molecular subtypes in a prospective epidemiological study with central pathology review and molecular testing. *PLoS One*. 2011;6(8):e20294. Doi: 10.1371/journal.pone.0020294
2. Trans-Atlantic RPSWG. Management of primary retroperitoneal sarcoma (RPS) in the adult: a consensus approach from the Trans-Atlantic RPS working group. *Ann Surg Oncol*. 2015;22(1):256–263. Doi: 10.1245/s10434-014-3965-2
3. Mullinax JE, Zager JS, Gonzalez RJ. Current diagnosis and management of retroperitoneal sarcoma. *Cancer Control*. 2011;18(3):177–187. Doi: 10.1177/107327481101800305
4. Hassan I, Park SZ, Donohue JH, et al. Operative management of primary retroperitoneal sarcomas: a reappraisal of an institutional experience. *Ann Surg*. 2004;239(2):244–250. Doi: 10.1097/01.sla.0000108670.31446.54
5. Strauss DC, Hayes AJ, Thomas JM. Retroperitoneal tumours: review of management. *Ann R Coll Surg Engl*. 2011;93(4):275–280. Doi: 10.1308/003588411X571944
6. Clark MA, Fisher C, Judson I, et al. Soft-tissue sarcomas in adults. *N Engl J Med*. 2005;353(7):701–711. Doi: 10.1056/NEJMra041866
7. Strauss DC, Hayes AJ, Thway K, et al. Surgical management of primary retroperitoneal sarcoma. *Br J Surg*. 2010;97(5):698–706. Doi: 10.1002/bjs.6994
8. Bates JE, Dhakal S, Mazloom A, et al. The benefit of adjuvant radiotherapy in high-grade nonmetastatic retroperitoneal soft tissue sarcoma: a SEER analysis. *Am J Clin Oncol*. 2018;41(3):274–279. Doi: 10.1097/COC.00000000000000259
9. Bonvalot S, Raut CP, Pollock RE, et al. Technical considerations in surgery for retroperitoneal sarcomas: position paper from E-surge, a master class in sarcoma surgery, and EORTC-STBSG. *Ann Surg Oncol*. 2012;19(9):2981–2991. Doi: 10.1245/s10434-012-2342-2
10. Learn PA, Bach PB. A decade of mortality reductions in major oncologic surgery: the impact of centralization and quality improvement. *Med Care*. 2010; 48 (12):1041–1049. Doi: 10.1097/MLR.0b013e3181f37d5f
11. Anaya DA, Lahat G, Liu J, et al. Multifocality in retroperitoneal sarcoma: a prognostic factor critical to surgical decision-making. *Ann Surg*. 2009;249(1):137–142. Doi: 10.1097/SLA.0b013e3181928f2f
12. Lewis JJ, Leung D, Woodruff JM, et al. Retroperitoneal soft-tissue sarcoma: analysis of 500 patients treated and followed at a single institution. *Ann Surg*. 1998;228(3):355–365. Doi: 10.1097/00000658-199809000-00008
13. Baldini EH, Wang D, Haas RL, et al. Treatment guidelines for preoperative radiation therapy for retroperitoneal sarcoma: Preliminary Consensus of an International Expert Panel. *Int J Radiat Oncol Biol Phys* 2015;92:602-612. Doi: 10.1016/j.ijrobp.2015.02.013
14. Albertsmeier M, Rauch A, Roeder F, et al. External beam radiation therapy for resectable soft tissue sarcoma: A Systematic Review and Meta-Analysis. *Ann Surg Oncol* 2018;25:754-767. Doi: 10.1245/s10434-017-6081-2
15. Pawlik TM, Pisters PWT, Mikula L, et al. Long-term results of two prospective trials of preoperative external beam radiotherapy for localized intermediate- or high-grade retroperitoneal soft tissue sarcoma. *Ann Surg Oncol* 2006;13:508-517. Doi: 10.1245/ASO.2006.05.035
16. Tzeng CW, Fiveash JB, Popple RA, et al. Preoperative radiation therapy with selective dose escalation to the margin at risk for retroperitoneal sarcoma. *Cancer* 2006;107:371-379. Doi: 10.1002/cncr.22005
17. Le Péchoux C, Musat E, Baey C, et al. Should adjuvant radiotherapy be administered in addition to front-line aggressive surgery (FAS) in patients with primary retroperitoneal sarcoma? *Annals of Oncology* 2013;24:832-837. Doi: 10.1093/annonc/mds516
18. Sampath S, Hitchcock YJ, Shrieve DC, et al. Radiotherapy and extent of surgical resection in retroperitoneal soft-tissue sarcoma : multi-institutional analysis of 261 patients. *J Surg Oncol*.

- 2010; 101 : 345-350. Doi: 10.1002 / jso.21474
19. Trovik LH, Ovrebø K, Almquist M, et al. Adjuvant radiotherapy in retroperitoneal sarcomas. A Scandinavian Sarcoma Group study of 97 patients, *Acta Oncol.* 2014; 53(9) : 1165-1172. Doi: 10.3109 / 0284186X.2014.921723
 20. Stoeckle E, Coindre JM, Bonvalot S, et al. Prognostic factors in retroperitoneal sarcoma: a multivariate analysis of a series of 165 patients of the French Cancer Center Federation Sarcoma Group. *Cancer.* 2001;92:359-368. Doi: 10.1002/1097-0142(20010715)92:2<359::AID-CNC-R1331>3.0.CO;2-Y
 21. Sindelar WF, Kinsella TJ, Chen PW, et al. Intraoperative radiotherapy in retroperitoneal sarcomas. Final results of a prospective, randomized, clinical trial. *Arch Surg* 1993;128:402-410. Doi: 10.1001 / archsurg. 1993.01420160040005
 22. Gieschen HL, Spiro IJ, Suit HD, et al. Long-term results of intraoperative electron beam radiotherapy for primary and recurrent retroperitoneal soft tissue sarcoma, *Int J Radiat Oncol Biol Phys*,2001 (50),127-31. Doi: 10.1016/S0360-3016(00)01589-3
 23. Pisters PWT, Ballo MT, Fenstermacher MJ, et al. Phase I trial of preoperative concurrent doxorubicin and radiation therapy, surgical resection, and intraoperative electron-beam radiation therapy for patients with localized retroperitoneal sarcoma. *J Clin Oncol* 2003;21:3092-3097. Doi: 10.1200/JCO.2003.01.143
 24. Roeder F, Ulrich A, Habl G, et al. Clinical phase I/II trial to investigate preoperative dose-escalated intensity-modulated radiation therapy (IMRT) and intraoperative radiation therapy (IORT) in patients with retroperitoneal soft tissue sarcoma: interim analysis. *BMC Cancer* 2014;14:617. Doi: 10.1186 / 1471-2407-14-617
 25. Penel N, Grosjean J, Robin YM, et al. Frequency of certain established risk factors in soft tissue sarcomas in adults: a prospective descriptive study of 658 cases. *Sarcoma* 2008;2008:459386. Doi: 10.1155/2008/459386
 26. Nussbaum DP, Rushing CN, Lane WO, et al. Preoperative or postoperative radiotherapy versus surgery alone for retroperitoneal sarcoma: a case-control, propensity score-matched analysis of a nationwide clinical oncology database. *Lancet Oncol* 2016;17:966-975. Doi: 10.1016 / S1470-2045 (16) 30050-X
 27. Baldini EH, Bosch W, Kane JM 3rd, et al. Retroperitoneal sarcoma (RPS) high risk gross tumor volume boost (HR GTV boost) contour delineation agreement among NRG sarcoma radiation and surgical oncologists. *Ann Surg Oncol* 2015;22:2846-2852. Doi: 10.1245 / s10434-015-4633-x