# 2.4.g. Renal Arter

## 2.4.g.1. Renal Arter Patolojilerinde Endovasküler ve Hibrid Tedavi Seçenekleri

Mehmet ÇEBER[1]

### 1. Renal Arter Stenozu ve Renal Hipertansiyon

Renal arter stenozu (RAS), refrakter hipertansiyona ve iskemik nefropati sonucunda böbrek yetmezliğine yol açabilmektedir. Renal fonksiyonların korunması ya da düzeltilmesi, hipertansiyonun tedavisi ya da kontrol altına alınabilmesi için stenotik renal arterlere sahip böbreğin revaskülarize edilmesi gerekmektedir (1).

Renalovasküler hipertansiyon, renal arterler ve dallarının stenozu sonucu gelişen ciddi diyastolik hipertnasiyon olarak tanımlanır. Tüm hipertansif hastaların %5'inden az bir kısmı renovasküler hipertansiyon hastaları oluşturur. Cerrahi olarak tedavi edilebilen hipertansiyon nedenleri arasında erişkinlerde birinci, pediatrik vakalarda aort koarktasyonundan sonra ikinci sırada yeralır (2).

İlk defa 1777 yılında J.H.Respinger, otopsi çalışmalarında, renal arterlerde darlık olabileceğini göztermiştir. 1836'da Bright, böbrek hastalığı ile hipertansiyon arasında bir ilişki olduğunu öne sürmüştür. Renal arter stenozu ile hipertansiyon ilişkisini ilk defa 1909 Janewey tarafından ortaya konmuştur (2).

Renovasküler patolojilerin etiyolojisinde en sık neden arteriyosklerozdur (%50-80). Diğer nedenler ise sıklık sırasına göre, fibromusküler displazi, vas-

[1] Dr. Öğr. Üyesi, Tokat Gaziosmanpaşa Üniversitesi Hastanesi, Kalp ve Damar Cerrahisi Kliniği, memetceber@hotmail.com

## Kaynaklar


1. Grüntzig A, Kuhlmann U, Vetter W, et al: Treatment of renovascular hypertension with percutaneous transluminal dilatation of a renal artery stenosis, Lancet 1:801-802, 1978.
2. Duran E. (2004), Kalp ve Damar Cerrahisi. İstanbul: Çapa Tıp Kitapevi ve Yayın Hizmetleri
3. Bui BT, Oliva VL, Leclerc G, et al: Renal artery aneurysm: Treatment with percutaneous placement of a stent-graft, Radiology 195:181-182, 1995.
4. Tham G, Ekelund L, Herrlin K, et al: Renal artery aneurysms: Natural history and prognosis, Ann Surg 197:348-352, 1983.
5. Wilms GE, Peene PT, Baert AL, et al: Renal artery stent placement with use of the Wallstent endoprosthesis, Radiology 179:457-462, 1991.
6. Rees CR, Palmaz JC, Becker GJ, et al: Palmaz stent in atherosclerotic stenoses involving the ostia of the renal arteries: Preliminary report of a multicenter study, Radiology 181:507-514, 1991.
7. van de Ven PJ, Kaatee R, Beutler JJ, et al: Arterial stenting and balloon angioplasty in ostial atherosclerotic renovascular disease: A randomised trial, Lancet 353:282-286, 1999.
8. Textor SC: Atherosclerotic renal artery stenosis: Overtreated but underrated? J Am Soc Nephrol19:656-659, 2008.
9. ASTRAL Investigators, Wheatley K, Ives N, et al: Revascularization versus medical therapy for renal-artery stenosis, N Engl J Med 361:1953-1962, 2009.29:517-524, 2008.
10. Axelrod DJ, Freeman H, Pukin L, et al: Guide wire perforation leading to fatal perirenal hemorrhage from transcortical collaterals after renal artery stent placement, J Vasc Interv Radiol 15:985-987, 2004
11. Bui BT, Oliva VL, Leclerc G, et al: Renal artery aneurysm: Treatment with percutaneous placement of a stent-graft, Radiology 195:181-182, 1995.
12. Manninen HI, Berg M, Vanninen RL: Stent-assisted coil embolization of wide-necked renal artery bifurcation aneurysms, J Vasc Intervent Radiol 19:487-492, 2008.
13. Hislop SJ, Patel SA, Abt PL, et al: Therapy of renal artery aneurysms in New York state: Outcomes of patients undergoing open and endovascular repair, Ann Vasc Surg 23:194-200, 2009.
14. Stanley J, Rhodes EL, Gewertz BL, et al: Renal artery aneurysms: Significance of macroaneurysms exclusive of dissections and fibrodysplastic mural dilatations, Arch Surg 110:1327-1333, 1973.

15. Eskandari MK, Resnick SA: Aneurysms of the renal artery, Semin Vasc Surg 18:202-208, 2005.
16. Bisschops RH, Popma JJ, Meyerovitz MF: Treatment of fibromuscular dysplasia and renal artery aneurysm with use of a stent-graft, J Vasc Interv Radiol 12:757-760, 2001.
17. Serter S, Oran I, Parildar M, et al: Fibromuscular dysplasia-related renal artery stenosis associated with aneurysm: Successive endovascular therapy, Cardiovasc Intervent Radiol 30:297-299, 2007.
18. Mali WP, Geyskes GG, Thalman R: Dissecting renal artery aneurysm: Treatment with an endovascular stent, AJR Am J Roentgenol 153:623-624, 1989.
19. Henry M, Polydorou A, Frid N, et al: Treatment of renal artery aneurysm with the multilayer stent, J Endovasc Ther 15:231-236, 2008.
20. Tan WA, Chough S, Saito J, et al: Covered stent for renal artery aneurysm, Catheter Cardiovasc Interv 52:106-109, 2001.
21. Lupattelli T, Abubacker Z, Morgan R, et al: Embolization of a renal artery aneurysm using ethylene vinyl alcohol copolymer (Onyx), J Endovasc Ther 10:366-370, 2003.vinyl alcohol copolymer, Cardiovasc Intervent Radiol 30:300-303, 2007.
22. Abath C, Andrade G, Cavalcanti D, et al: Complex renal artery aneurysms: Liquids or coils? Tech Vasc Interv Radiol 10:299-307, 2007
23. Edvards B, Wooster M, Tanious A, Management of Aortoiliac Aneurysms with Atypical Renal Artery Anatomy, Annals of Vascular Surgery,2019;54:110-117
24. Chiesa R, Kahlberg A, Mascia D, Use of a novel hybrid vascular graft for sutureless revascularization of the renal arteries during open thoracoabdominal aortic aneurysm repair, Journal of Vascular Surgery, 60:3,2014
25. Shao P, Qin C, Meng X, Hybrid Laparoscopic Technique for Renal Artery Takayasu Arteritis, 42:803-808,2011
26. Uğurlucan M, Önal M, Öztaş D, Transplanted kidney, stenotic renal artery and a giant pseudoaneurysm, Turkish Journal of Thoracic and Cardiovascular Surgery 2019:27:114-117
27. Jung H, Lee S, Hybrid treatment of coexisting renal artery aneurysm and abdominal aortic aneurysm in agallbladder cance patient, Korean Society for Vascular Surgery, 10.5758/2014.30.2.68
28. Bakoviannis C, Cagiannos C, Wasilliew S, Laparoscopic hybrid tecniques for ectopic or accessory renal arteries debranching in complex endovascular aneurysm repair, Journal of Cardiovascular Surgery(Torino), 2008 Feb49(1):67-61