



BÖLÜM 16

KRONİK BÖBREK HAŞTALIĞINDA VE BÖBREK NAKLİNDE KONTRASEPSİYON

Elizabeth Schmidt, Sarah L. PACHTMAN

Justin T. DIEDRICH

Çeviri: Mustafa SEVİNÇ

Plansız gebelik Amerika Birleşik Devletlerinde bir epidemidir. Bir yılda gerçekleşen 6.1 milyon gebeliğin yaklaşık yarısı plansızdır ve bunların %42'si düşükle sonlanmaktadır [1]. İleri evre kronik böbrek hastalığı (KBH) olan, diyalize giren, böbrek nakilli olan kadınlarda kontraseptif danışmanlık, istenmeyen gebeliklerin önlenmesi için önemlidir. Bu bölümde, KBH'lı hastaların tıbbi durumları göz önünde bulundurularak, kontraseptif metotların fayda ve zararları, hasta ve hekimlerin hangi metodun en iyi olduğuna karar vermesinde yardımcı olabilmek için kılavuzların derlemesi, irdelenmiştir.

KONTRASEPSİYON İÇİN GENEL BİLGİLER

Doğurganlık son dönem böbrek hastalığında toplumun genelinde göre daha düşüktür ancak gebelik nadir bir olay değildir. Amerika'daki nefrologlara yönelik bir ankette, katılımcıların yaklaşık %50'sinin gebe diyaliz hastasına hizmet verdiği görülmüştür [2,3]. Bu popülasyonda amenore da dâhil olmak üzere menstrüel düzensizlikler görülebilir. Ancak, amonere, anovulasyon demek değildir. Bu yüzden, bu alt gruptaki kadınlarla gebelik hakkında konuşmak çok önemlidir. Gebelik planlaması ve yönetimi nefrologlarla, yüksek riskli gebelik uzmanları birlikteliği ile yapılmalıdır. Diyaliz sırasına gebelik, rezidüel renal fonksiyonların kaybına ve preeklampsi ve/ya eklampsi, erken travay, iatrojenik erken doğum, spontan düşük, rahim içi gelişme geriliği hatta ölü doğumun da dâhil olduğu daha kötü maternal ve fetal sonuçlara yol açabilir [4]. Bahsedilen bu olasılıklardan dolayı uzmanlar geçmişte, bu hasta grubunda, gebelikten kaçınılmasını sıklıkla önerirlerdi [5].

Bir hastaya yönelik en güveli kontrasepsiyon metoduna karar verilirken altta yatan tüm tıbbi komorbiditeler göz önünde bulundurulmalıdır. *The Centers for Disease*



SONUÇ

Kronik böbrek hastalığı ve nakil popülasyonundaki artış nedeni ile, nakil önce ve sonrasındaki dönemde istenmeyen gebeliklerin önlenmesi adına kontrasepsiyon danışmanlığı gereklidir. İstenmeyen gebeliğin hem anne hem de fetus üzerinde yıkıcı etkileri olabilir. Hekim, en iyi kontrasepsiyon metodunu bulmak için hasta ile birlikte, hastanın tercihini ve tıbbi komorbiditeleri göz önünde bulundurarak, iş birliği yapmalıdır. LNG-RİS KBH ve nakilli hasta için ideal bir seçenektir çünkü; ilk önerilen tedavidir, aylık kan kaybının azalmasına yardımcı olacaktır ve kolayca geri dönüştürülebilir. RİA'ya ek olarak, ENG-implant yüksek etkinliği ve kullanım kolaylığı nedeni ile iyi bir yalnızca progestin içeren metottur. Kişisel kanama paternleri değişkenlik gösterebilir fakat tedavi edilebilirler. Kombine hormonal metotlar vaka bazlı bazı durumlarda uygun olabilir fakat yüksek başarısızlık oranı dolayısı ile ilk önerilen metot olamayabilirler. Şayet gebelik oluşur ve sonlandırılmak istenirse, işlemin ayaktan mı yoksa yatırılarak mı yapılacağı hastanın klinik durumuna bağlıdır. Aile planlama uzmanı ile konsültasyon tavsiye edilir. Kadınların çoğu medikal sonlandırma için aday olmayacaktır. KBH'ya eşlik eden birçok fizyolojik değişiklikten dolayı, bu popülasyonda düzensiz kanama da gelişebilir ve sağlıklı akranlarındaki tanısal algoritmada olduğu gibi tetkik edilmesi gerekir. Tedavi seçenekleri klinik duruma ve komorbiditelere bağlı olarak şekillendirilebilir.

KAYNAKLAR

1. Finer LB, Zolna MR. Declines in unintended pregnancy in the United States, 2008–2011. *N Engl J Med.* 2016;374(9):843–52.
2. Watnick S, Rueda J. Reproduction and contraception after kidney transplantation. *Curr OpinObstet Gynecol.* 2008;20(3):308–12.
3. Sachdeva M, et al. Pregnancy outcomes in women on hemodialysis: a national survey. *Clin Kidney J.* 2017;10(2):276–81.
4. Deshpande NA, et al. Pregnancy outcomes in kidney transplant recipients: a systematic review and meta-analysis. *Am J Transplant.* 2011;11(11):2388–404.
5. McKay DB, et al. Reproduction and transplantation: report on the AST consensus conference on reproductive issues and transplantation. *Am J Transplant.* 2005;5(7):1592–9.
6. Curtis KM, et al. U.S. medical eligibility criteria for contraceptive use, 2016. *MMWR RecommRep.* 2016;65(3):1–103.
7. Curtis KM, et al. U.S. selected practice recommendations for contraceptive use, 2016. *MMWRRecomm Rep.* 2016;65(4):1–66.
8. Stehman-Breen C, et al. Pharmacokinetics of oral micronized beta-estradiol in postmenopausalwomen receiving maintenance hemodialysis. *Kidney Int.* 2003;64(1):290–4.
9. Cardiovascular disease and use of oral and injectable progestogen-only contraceptives and combined injectable contraceptives. Results of an international, multicenter, case-control study. World Health Organization collaborative study of cardiovascular disease and steroid hormone contraception. *Contraception.* 1998;57(5):315–24.
10. Heinemann LA, et al. Oral progestogen-only contraceptives and cardiovascular risk: resultsfrom the transnational study on oral contraceptives and the health of young women.



- Eur J Contracept Reprod Health Care. 1999;4(2):67–73.
11. Vasilakis C, Jick H, del Mar Melero-Montes M. Risk of idiopathic venous thromboembolism in users of progestagens alone. *Lancet*. 1999;354(9190):1610–1.
 12. Diedrich JT, et al. Association of short-term bleeding and cramping patterns with long-acting reversible contraceptive method satisfaction. *Am J Obstet Gynecol*. 2015;212(1):50 e18.
 13. Pakarinen P, Luukkainen T. Treatment of menorrhagia with an LNG-IUS. *Contraception*. 2007;75(6 Suppl):S118–22.
 14. Andersson JK, Rybo G. Levonorgestrel-releasing intrauterine device in the treatment of menorrhagia. *Br J Obstet Gynaecol*. 1990;97(8):690–4.
 15. Stefanski A, et al. Early increase in blood pressure and diastolic left ventricular malfunction in patients with glomerulonephritis. *Kidney Int*. 1996;50(4):1321–6.
 16. Benagiano GDE, Goldzieher JW, Gray R, Apelo R, Bergstein N, JC DS, Devi PK, Kesseru E, Koetsawang S, Ojo OA, Gupta AN, Pretnar A, Topozada HK. Multinational comparative clinical evaluation of two long-acting injectable contraceptive steroids: Norethisterone oenanthate and medroxyprogesterone acetate: 2. Bleeding patterns and side effects. *Contraception*. 1978;17(5):395–406.
 17. Nilsson CG, et al. Two years' experience with two levonorgestrel-releasing intrauterine devices and one copper-releasing intrauterine device: a randomized comparative performance study. *Fertil Steril*. 1983;39(2):187–92.
 18. McCann MF, Potter LS. Progestin-only oral contraception: a comprehensive review. *Contraception*. 1994;50(6 Suppl 1):S1–195.
 19. Mansour D, et al. The effects of Implanon on menstrual bleeding patterns. *Eur J Contracept Reprod Health Care*. 2008;13(Suppl 1):13–28.
 20. Laifer SA, et al. Pregnancy and liver transplantation. *Obstet Gynecol*. 1990;76(6):1083–8.
 21. Mastrobattista JM, Gomez-Lobo V. Society for Maternal Fetal Medicine, Pregnancy after solid organ transplantation. *Obstet Gynecol*. 2008;112(4):919–32.
 22. Sibanda N, et al. Pregnancy after organ transplantation: a report from the UK transplant pregnancy registry. *Transplantation*. 2007;83(10):1301–7.
 23. Murray JE, et al. Successful pregnancies after human renal transplantation. *N Engl J Med*. 1963;269:341–3.
 24. Coscia LA, et al. Report from the National Transplantation Pregnancy Registry (NTPR): outcomes of pregnancy after transplantation. *Clin Transpl*. 2010:65–85.
 25. Armenti VT, et al. Report from the National Transplantation Pregnancy Registry: outcomes of pregnancy after transplantation. *Clin Transpl*. 2006:57–70. E. Schmidt et al.
 26. Rose C, et al. Timing of pregnancy after kidney transplantation and risk of allograft failure. *Am J Transplant*. 2016;16(8):2360–7.
 27. French VA, et al. Contraception and fertility awareness among women with solid organ transplants. *Obstet Gynecol*. 2013;122(4):809–14.
 28. Rafie S, et al. Contraceptive use in female recipients of a solid-organ transplant. *Prog Transplant*. 2014;24(4):344–8.
 29. Hatcher RA, Trussell J, Nelson A, Cates W, Kowal D, Policar M. *Contraceptive technology*. 20th ed. Atlanta: Ardent Media; 2011.
 30. Winner B, et al. Effectiveness of long-acting reversible contraception. *N Engl J Med*. 2012;366(21):1998–2007.
 31. Diedrich JT, et al. Three-year continuation of reversible contraception. *Am J Obstet Gynecol*. 2015;213(5):662 e1–8.
 32. Hricik DE. *Transplant immunology and immunosuppression: core curriculum 2015*. *Am J Kidney Dis*. 2015;65(6):956–66.
 33. Hart A, et al. OPTN/SRTR 2016 annual data report: kidney. *Am J Transplant*. 2018;18(Suppl 1):18–113.



34. Ramhendar T, Byrne P. Use of the levonorgestrel-releasing intrauterine system in renal transplant recipients: a retrospective case review. *Contraception*. 2012;86(3): 288–9.
35. Fong YF, Singh K. Effect of the levonorgestrel-releasing intrauterine system on uterine myomas in a renal transplant patient. *Contraception*. 1999;60(1):51–3.
36. Bahamondes MV, et al. Ease of insertion and clinical performance of the levonorgestrel-releasing intrauterine system in nulligravidas. *Contraception*. 2011;84(5):e11–6.
37. Tepper NK, et al. Safety of intrauterine devices among women with HIV: a systematic review. *Contraception*. 2016;94(6):713–24.
38. Kim CR, et al. Immunologic evaluation of the endometrium with a levonorgestrel intrauterine device in solid organ transplant women and healthy controls. *Contraception*. 2016;94(5):534–40.
39. Juliato CRT, Stahlschmidt P, Fernandes A, Monteiro I, Bahamondes L. A case series on the use of levonorgestrel 52 mg intrauterine system after organ transplant. *Contraception*. 2018;98(3):252–4.
40. Zerner J, et al. Intrauterine contraceptive device failures in renal transplant patients. *J Reprod Med*. 1981;26(2):99–102.
41. Ortiz ME, Croxatto HB. Copper-T intrauterine device and levonorgestrel intrauterine system: biological bases of their mechanism of action. *Contraception*. 2007;75(6 Suppl): S16–30.
42. Allen RH, Cwiak CA. *Contraception for the medically challenging patient*. New York, NY: Springer; 2014.
43. Roger T, et al. Macrophage migration inhibitory factor promotes innate immune responses by suppressing glucocorticoid-induced expression of mitogen-activated protein kinase phosphatase-1. *Eur J Immunol*. 2005;35(12):3405–13.
44. Toivonen J, Luukkainen T, Allonen H. Protective effect of intrauterine release of levonorgestrel on pelvic infection: three years' comparative experience of levonorgestrel- and copper-releasing intrauterine devices. *Obstet Gynecol*. 1991;77(2):261–4.
45. Farley TM, et al. Intrauterine devices and pelvic inflammatory disease: an international perspective. *Lancet*. 1992;339(8796):785–8.
46. Hubacher D, et al. Use of copper intrauterine devices and the risk of tubal infertility among nulligravid women. *N Engl J Med*. 2001;345(8):561–7.
47. Long-acting reversible contraception: implants and intrauterine devices. *Practice Bulletin No. 186*. American College of Obstetricians and Gynecologists. *Obstet Gynecol*. 2017;130:e251–69.
48. McNicholas C, et al. Prolonged use of the etonogestrel implant and levonorgestrel intrauterine device: 2 years beyond Food and Drug Administration-approved duration. *Am J Obstet Gynecol*. 2017;216(6):586 e1–6. 16 *Contraception in Chronic Kidney Disease and Renal Transplantation*
49. Wu JP, Pickle S. Extended use of the intrauterine device: a literature review and recommendations for clinical practice. *Contraception*. 2014;89(6):495–503.
50. Mansour D, et al. The management of unacceptable bleeding patterns in etonogestrel-releasing contraceptive implant users. *Contraception*. 2011;83(3):202–10.
51. Schwallie PC, Assenzo JR. Contraceptive use – efficacy study utilizing medroxyprogesterone acetate administered as an intramuscular injection once every 90 days. *Fertil Steril*. 1973;24(5):331–9.
52. Clark MK, et al. Bone mineral density loss and recovery during 48 months in first-time users of depot medroxyprogesterone acetate. *Fertil Steril*. 2006;86(5):1466–74.
53. Canalis E, et al. Glucocorticoid-induced osteoporosis: pathophysiology and therapy. *Osteoporos Int*. 2007;18(10):1319–28.
54. Kavanaugh ML, Jerman J. Contraceptive method use in the United States: trends and characteristics between 2008, 2012 and 2014. *Contraception*. 2018;97(1):14–21.
55. Pietrzak B, et al. Combined oral contraception in women after renal transplantation. *Neuro*



- Endocrinol Lett. 2006;27(5):679–82.
56. Paternoster DM, et al. The contraceptive vaginal ring in women with renal and liver transplantation: analysis of preliminary results. *Transplant Proc.* 2010;42(4):1162–5.
 57. Jabiry-Zieniewicz Z, et al. Low-dose hormonal contraception after liver transplantation. *Transplant Proc.* 2007;39(5):1530–2.
 58. Cleland K, et al. The efficacy of intrauterine devices for emergency contraception: a systematic review of 35 years of experience. *Hum Reprod.* 2012;27(7):1994–2000.
 59. Glasier AF, et al. Ulipristal acetate versus levonorgestrel for emergency contraception: a randomized non-inferiority trial and meta-analysis. *Lancet.* 2010;375(9714):555–62.
 60. Moreau C, Trussell J. Results from pooled phase III studies of ulipristal acetate for emergency contraception. *Contraception.* 2012;86(6):673–80.
 61. Glasier A, et al. Can we identify women at risk of pregnancy despite using emergency contraception? Data from randomized trials of ulipristal acetate and levonorgestrel. *Contraception.* 2011;84(4):363–7.
 62. Paul M, Lichtenberg ES, Borgatta L, Grimes DA, Stubblefield PG, Creinin, MD. Management of Unintended and Abnormal Pregnancy: Comprehensive Abortion Care. Hoboken, NJ: John Wiley and Sons, 2009.
 63. Creinin MD, Grossman DA. Medical management of first-trimester abortion. *Contraception.* 2014;89(3):148–61.
 64. Diagnosis of abnormal uterine bleeding in reproductive-aged women. Practice Bulletin No. 128. American College of Obstetricians and Gynecologists. *Obstet Gynecol.* 2012;120:197–206.
 65. Munro MG, et al. FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nonpregnant women of reproductive age. *Int J Gynaecol Obstet.* 2011;113(1): 3–13.
 66. Fraser IS, et al. A process designed to lead to international agreement on terminologies and definitions used to describe abnormalities of menstrual bleeding. *Fertil Steril.* 2007;87(3): 466–76.
 67. James AH. More than menorrhagia: a review of the obstetric and gynaecological manifestations of bleeding disorders. *Haemophilia.* 2005;11(4):295–307.
 68. Kricka LJ. Human anti-animal antibody interferences in immunological assays. *Clin Chem.* 1999;45(7):942–56.
 69. Vladutiu AO, et al. Heterophilic antibodies interfering with radioimmunoassay. A false-positive pregnancy test. *JAMA.* 1982;248(19):2489–90.
 70. Kelekci S, et al. Comparison of transvaginal sonography, saline infusion sonography, and office hysteroscopy in reproductive-aged women with or without abnormal uterine bleeding. *Fertil Steril.* 2005;84(3):682–6.
 71. Soguktas S, et al. Comparison of saline infusion sonohysterography and hysteroscopy in diagnosis of premenopausal women with abnormal uterine bleeding. *Eur J Obstet Gynecol Reprod Biol.* 2012;161(1):66–70. E. Schmidt et al.
 72. Doubilet PM. Diagnosis of abnormal uterine bleeding with imaging. *Menopause.* 2011;18(4):421–4.
 73. Lionaki S, et al. Venous thromboembolism in patients with membranous nephropathy. *Clin JAm Soc Nephrol.* 2012;7(1):43–51.
 74. Kaminski P, et al. Gynecological issues after organ transplantation. *Neuro Endocrinol Lett.* 2008;29(6):852–6.
 75. Kaunitz AM, et al. Levonorgestrel-releasing intrauterine system and endometrial ablation in heavy menstrual bleeding: a systematic review and meta-analysis. *Obstet Gynecol.*



- 2009;113(5):1104–16.
76. Kaunitz AM, Inki P. The levonorgestrel-releasing intrauterine system in heavy menstrual bleeding: a benefit-risk review. *Drugs*. 2012;72(2):193–215.
 77. Berntorp E, Follrud C, Lethagen S. No increased risk of venous thrombosis in women taking tranexamic acid. *Thromb Haemost*. 2001;86(2):714–5.
 78. Sundstrom A, et al. The risk of venous thromboembolism associated with the use of tranexamic acid and other drugs used to treat menorrhagia: a case-control study using the general practice Research database. *BJOG*. 2009;116(1):91–7.
 79. Tengborn L, Blomback M, Berntorp E. Tranexamic acid – an old drug still going strong and making a revival. *Thromb Res*. 2015;135(2):231–42.
 80. Weigert AL, Schafer AI. Uremic bleeding: pathogenesis and therapy. *Am J Med Sci*. 1998;316(2):94–104.
 81. Livio M, et al. Conjugated estrogens for the management of bleeding associated with renal failure. *N Engl J Med*. 1986;315(12):731–5.
 82. Heisteringer M, et al. Effect of conjugated estrogens on platelet function and prostacyclin generation in CRF. *Kidney Int*. 1990;38(6):1181–6.
 83. Vigano G, et al. Dose-effect and pharmacokinetics of estrogens given to correct bleeding time in uremia. *Kidney Int*. 1988;34(6):853–8.
 84. Sloan JA, Schiff MJ. Beneficial effect of low-dose transdermal estrogen on bleeding time and clinical bleeding in uremia. *Am J Kidney Dis*. 1995;26(1):22–