BÖLÜM 15

Ejakülasyon Bozukluklarının Tanı ve Tedavisi

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GİRİŞ

Erkek infertilitesinin etiyolojik faktörlerinden biridir. Normal yollardan fertilitenin olabilmesi için testiste meydana gelen spermatozoanın, normal anatomik koşullarda vajen içine kadar sorunsuz olarak taşınabilmesi gerekmektedir. Ejakülasyon posterior üretradaki semenin periüretral ve pelvik taban kaslarının ritmik kasılmaları ile üretra measından dışarı atılmasıdır. Ejakülasyon süreci birbirini takip eden emisyon ve ekspulsiyon fazlarından oluşmaktadır.

Emisyon: Ejakülat, veziküla seminalis, duktus deferens ve prostat sıvılarını içerir ve bu organların kasılmasıyla arka üretrada birikir. Bu esnada koordineli olarak mesane boynu kapanır. Emisyon T10-L3'den köken alan sempatik nöronlar tarafından koordine edilir (1).

Ekspulsiyon veya Gerçek Ejakülasyon: Emisyonu takiben oluşur. Ejakülat,ekspulsiyon esnasında ritmik olarak pelvik taban kasları, ischiokavernöz ve bulbospongioz kasın kasılması üretral sfinkterin gevşemesiyle üretra boyunca ilerler ve eksternal meatustan dışarı atılır. Üretral sfinkterin aralıklı kasılması proksimal üretraya retrograd akışı engeller (2). Ejakülasyon için S2-4'ten kay-

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şaltılarak spermlerin en az hasar görecek şekilde idrarla teması azaltılır ve yeterli ejakülat toplanarak intrauterin inseminasyon veya yardımlı üreme teknikleri için hazırlık yapılarak kullanımı sağlanır (12). Bununla ilişkili olarak retrograd ejakülasyonu olup idrardan sperm sağlanan olgularda intrasitoplazmik sperm injeksiyonu (ICSI) ile %51.2 oranında gebelik elde edildiği bildirilmektedir. Bu olguların 7'sinde canlı doğum gerçekleştirilmiştir (74).

KAYNAKLAR

1. Brugh MV, Lynch FD. Urolojical interventions for the treatment of male infertility. Edit: Oehringer SC, Kruger TF. Male Infertility, Informa UK Ltd. 2007, 324.
2. Motofei IG, Rowland DL. Neurophysiology of the ejaculatory process: developing perspectives. BJUI, 15 November 2005. https://doi.org/10.1111/j.1464-410x.2005.05850x.
3. Erdemir F. Ejakülasyona etki eden ilaçlar. Androloji Bülteni. 2005
4. Lee HD, Lee HS, Park SH, Jo DG, Choe JH, Lee JS, Seo JT. Causes and classification of male infertility in Korea. Clin Exp Reprod Med. 2012 Dec; 39 (4):172-5.
5. Juarez-Bengoa A, Bagnarello-Gonzalez F, Rodriguez-Perdomo DF, Rodriguez-Yee E. Prevalance of retrograde ejaculation in infertility associated to hypospermia. Ginecol Obstet Mex. 2011;79:61-6.
6. Brackett NL, Ohl AD, Sonksen J, Lynne CM. Abnormalities of ejaculation, Edit: Lipshultz L, Howards S, 4th Edition, Infertility in the male, Cambridge Univ Press. 2009;454.
7. Waldinger MD. Lifelong prematüre ejaculation: definition, serotonergic neurotransmission and drug treatment. World J Urol. 2005;23:102-10.
8. Kuloğlu M, Geçici Ö, Kılıç N, Tezcan E. Antidepresan ilaçların cinsel işlev üzerine etkileri. Bull Clin Psycopharmacol. 2000; 10:97-102.
9. Andersson KE, Mulhall JP, Wyllie MG. Pharmacokinetic and pharmacodynamic features of dapoxetine, a novel drug for 'on-demand' treatment of prematüre ejaculation. BJU Int. 2006;97:311-5.
10. Pryor JL, Althof SE, Steidle C, Kell S. Efficacy and tolerability of dapoxetine in the treatment of prematüre ejaculation. J Urol.2005;173 (supply).201.
11. Hellstrom W, Gittelman M, Althof S, Ho KF, Kell S. Dapoxetine HCL for the treatment of prematüre ejaculation: A phase II, randomised, double-blind, placebo-controlled study. J Sex Med. 2004:59.
12. Ohl D, Quallich S, Sonksen J, Brackett N, Lynne C. Ejaculatory dysfunction. Current clinical urology: Male Infertility: Problems and solutions: Edit:E.S.Sbanegh Springer Science + Business Media. 2011;31-8.
13. Mc Mahon C, Waldinger M, Rowland D, et al. Ejaculatory disorders. Edit:Porst H, Buvat J. Sexual Medicine Blackwell Publishing.2006;188-9.
14. Perelman MA, Rowland DL. Retarded Ejaculation. World J Urol. 2006 Dec;24 (6):645-52. Doi: 10.1007/s00345-006-0127-6.
15. Perelman MA . Regarding ejaculation, delayed and otherwise. J Androl. Jul-Aug 2003;24 (4):496. Doi: 10.1002/j.1939-4640.2003.tb02699.x.

16. Waldinger MD. The neurobiological approach to prematüre ejaculation. J Urol. 2002 Dec;168 (&):2359-67. Doi: 10.1097/01.ju.0000035599.35887.8f.
17. Waldinger MD, Berendsen HH, Blok BF, Olivier B, Holstege G. Premature ejaculation and serotonergic antidepressants-induced delayed ejaculation: the involvement of the serotonergic system. Behav Brain Res. 1998 May;92 (2):111-8. Doi: 10.1016/s0166-4328 (97)00183-6.
18. Paduch DA, Polzer P, Morgentaler A, Althof S, Donatucci C, Ni X, Patel AB, Basaria S. Clinical and Demographic Correlates of Ejaculatory Dysfunctions Other Than Premature Ejaculation: A Prospective, Observational Study. The Journal of Sexual Medicine Volume 12, Issue 12, December 2015, Pages 2276-2286.
19. Bobes J, Gonzalez MP, Bascaran MT, Clayton A, Garcia M, Moros FR-V, Banus S. Evaluating Changes in Sexual Functioning in Depressed Patients: Sensitivity to Change of the CSFQ. Journal of Sex & Marital Therapy Volume 28, 2002 – Issue 2, Pages 93-103.
20. Althof SE. Psychological interventions for delayed ejaculation/orgasm. International Journal of Impotence Research 24, 131-136 (2012).
21. Brotto L, Atallah S, Johnson-Agbakwu C, Rosenbaum T, Abdo C, Byers ES, Graham C, Nobre P, Wylie K. Psychological and Interpersonal Dimensions of Sexual Function and Dysfunction. The Journal of Sexual Medicine Volume 13, Isuue 4, April 2016, Pages 538-571.
22. Marra G, Sturch P, Oderda M, Tabatabaei S, Muir G, Gontero P. Systematic review of lower urinary tract symptoms/benign prostatic hyperplasia surgical treatment on men's ejaculatory function: Time for a bespoke approach? International Journal of Urology, 14 July 2015, https://doi.org/10.1111/iju.12866.
23. Holt B, Pryor JP, Hendry WF. Male infertility after surgery for imperforate anus. Journal of Pediatric Surgery Volume 30, Issue 12, December 1995, Pages 1677-1679.
24. Carani C, Isıdori AM, Granata A, Carosa E, Maggi M, Lenzi A, Jannini EA. Multicenter study on the prevalence of sexual symptoms in male hypo- and hyperthyroid patients. J Clin Endocrinol Metab. 2005 Dec;90 (12):6472-9. Doi:10.1210/jc.2005-1135.
25. Hess MJ, Hough S. Impact of spinal cord injury on sexuality: Broad-based clinical practice intervention and application. J Spinal Cord Med. 2012 Jul; 35 (4): 212-219 doi: 10.1179/2045772312Y.0000000025.
26. Dunsmuir WD, Holmes SA. The aetiology and management of erectile, ejaculatory, and fertility problems in men with diabetes mellitus. Diabet Med. 1996 Aug;13 (8):700-8. Doi: 10.1002/ (SICI)1096-9136 (199608)13:8<700::AID-DIA174>3.0.CO;2-8.
27. Althof SE, McMahon CG, Waldinger MD, Serefoglu EC, Shindel AW, Adaikan PG, Becher E, Dean J, Giuliano F, Hellstrom WJG, Giraldi A, Glina S, Incrocci L, Jannini E, McCabe M, Parish S, Rowland D, Segraves RT, Sharlip I, Torres LO. An update of the International Society of Sexual Medicine's guidelines fort he diagnosis and treatment of the prematüre ejaculation (PE). J Sex Med. 2014 Jun; 11 (6):1392-422. Doi: 10.1111/jsm.12504. Epub 2014 May 22.
28. Grimm RH, Grandits GA, Prineas RJ, McDonald RH, Lewis CE, Flack JM, Yunis C, Svendsen K, Liebson PR, Elmer PJ (1997). Long-term effects on sexual function of five antihypertensive drugs and nutritional hygienic treatment in hypertensive men and women. Treatment of Mild Hypertension Study (TOMHS). Hypertension 29,8.
29. Kulchavenya E. 443 Male Genital Tuberculosis. March 2009. European Supplements 8 (4):231-231.
30. Shin DH, Spitz A. The Evaluation and Treatment of Delayed Ejaculation. Sex Med Rev. 2014 Oct;2 (3-4):121-133. Doi: 10.1002/smrj.25. Epub 2015 Oct 19.

31. McCormick S, Olin J, Brotman AW. Reversal of fluoxetine-induced anorgasmia by cyproheptadine in two patients. J Clin Psychiatry. 1990;51 (9): 383–4.
32. Ferraz MR, Santos R. Amantadine stimulates sexual behavior in male rats. Pharmacol Biochem Behav. 1995; 51 (4): 709–14.
33. Krüger TH, Haake P, Hartmann U, Schedlowski M, Exton MS. Orgasm-induced prolactin secretion: feedback control of sexual drive? Neurosci Biobehav Rev 2002; 26: 31-44.
34. Veening JG, de Jong TR, Waldinger M, Korte SM, Olivier B. The Role of Oxytocin in Male and Female Reproductive Behavior. July 2014. European Journal of Pharmacology 753 DOI: 10.1016/j.ejphar.2014.07.045.
35. MacDonald K, Feifel D. Dramatic improvement in sexual function induced by intranasal oxytocin. J Sex Med. 2012 May; 9 (5):1407-10. PMID: 22458365.
36. Ashton AK, Rosen RC. Bupropion as an antidote for serotonin reuptake inhibitor-induced sexual dysfunction. J Clin Psychiatry. 1998 Mar;59 (3):112–5.
37. Landén M, Eriksson E, Fahlén T. Effect of buspirone on sexual dysfunction in depressed patients treated with selective serotonin reuptake inhibitors. J Clin Psychopharmacol. 1999 Jun;19 (3):268-71. Doi: 10.1097/00004714-199906000-00012.
38. Adeniyi AA, Brindley GS, Pryor JP, Ralph DJ. Yohimbine in the treatment of orgasmic dysfunction. Asian Journal of Andrology / Volume 9, Issue 3 / p.403-407.
39. Jacobsen FM. Fluoxetine-induced sexual dysfunction and an open trial of yohimbine. The Journal of Clinical Psychiatry, 53 (4), 119-122.
40. Bronner G, Vodusek DB. Management of sexual dysfunction in Parkinson's disease. Ther Adv Neurol Disord. 2011 Nov;4 (6):375-83. Doi:10.1177/1756285611411504.
41. Nelson CJ, Ahmed A, Valenzuela R, Parker M, Mullhall JP. Assessment of Penile Vibratory Stimulation as a Management Strategy in Men with Secondary Retarded Orgasm. Urology. 2007 Mar; 69 (3): 552-556. Doi: 10.1016/j.urology.2006.02.048.
42. Jenkins LC, Mulhall JP. Delayed Orgasm and Anorgasmia. Fertil Steril. 2015 Nov; 104 (5): 1082-1088. Doi: 10.1016/j.fertnstert.2015.09.029.
43. Rowland D, McMahon CG, Abdo C, Chen J, Jannini E, Waldinger MD, Ahn Y. Disorders of Orgasm and Ejaculation in Men. The Journal of Sexual Medicine, Volume 7, Issue 4, Part 2, April 2010, Pages 1668-1686. Doi:10.1111/j.1743-6109.2010.01782.x.
44. Kamischke A, Nieschlag E. Update on medical treatment of ejaculatory disorders. Int J Androl. 2002 Dec;25 (6):333-44. Doi: 10.1046/j.1365-2605.2002.00379.x.
45. van Basten JP, Jonker-Pool G, van Driel MF, Sleijfer DT, Droste JHJ, van de Wiel HBM, Koops HS, Molenaar WM and Hoekstra HJ (1997b) Sexual functioning after multimodality treatment for disseminated nonseminomatous testicular germ cell tumor. J Urol 158: 1411–1416.
46. Jonker-Pool G, van Basten JP, Hoekstra HJ, van Driel MF, Sleijfer DT, Koops HS and van de Wiel HB (1997) Sexual functioning after treatment for testicular cancer: comparison of treatment modalities. Cancer 80: 454–464.
47. Borghede G, Hedelin H. Radiotherapy of localised prostate cancer. Analysis of late treatment complications. A prospective study. Radiother Oncol. 1997 May;43 (2):139-46. Doi: 10.1016/s0167-8140 (96)01871-3.
48. Minderhoud JM, Leemhuis JG, Laban E, Smits PM. Sexual disturbances arising from multiple sclerosis. Acta Neurol Scand. 1984 Oct;70 (4):299-306. Doi: 10.1111/j.1600-0404.1984.tb00827.x.

49. Ohl DA, Quallich SA, Sonksen Jens, Brackett NL, Lynne CM. Anejaculation and retrograde ejaculation. Urol Clin North Am. 2008 May;35 (2):211-20, viii. Doi:10.1016/j.ucl.2008.01.014.
50. Saferinejad MR. Midodrine for the treatment of organic anejaculation but not spinal cord injury: a prospective randomized placebo-controlled double-blind clinical study. Int J Import Res. 2009;21:213-20.
51. Soler JM, Previnaire JG, PLante P, Denys P, Chartier-Kastler E. Midodrine improves ejaculation in spinal cord injured men. J Urol.2007;178:2082-6.
52. Sonksen J, Fode M, Löchner-Ernst D, Ohl DA. Vibratory ejaculation in 140 spinal cord injured men and home insemination of their partners. Spinal Cord. 2012;50:63-6.
53. Lu S, Cui Y, Li X, Zhang H, Hu J, Liu J, Chen ZJ. Sperm retrieval in anejaculatory diabetic men who failed in drug treatment and penil vibratory stimulation during blood sugar under control. Andrologia. 2013 Mar 13. Doi: 10.1111/and.12087.
54. Beckerman H, Becher J, Lankhorst GJ. The effectiveness of vibratory stimulation in anejaculatory men with spinal cord injury. Review article. Paraplegia. 1993;31:689-99.
55. Brackett NL, Ibrahim E, Iremashvili V, Aballa TC, Lynne CM. Treatment for ejaculatory dysfunction in men with spinal cord injury: an 18-year single center experience. J Urol. 2010;183:2304-8.
56. McGuire C, Manecksha RP, Sheils P, McDermott TE, Grainger R, Flynn R. Electroejaculatory stimulation for male infertility secondary to spinal cord injury: the Irish experience in National Rehabilitation Hospital. Urology. 2011;77:83-7.
57. Heruti RJ, Katz H, Menashe Y, Weissenber R, Raviv G, Madjar I, Ohry A. Treatment of male infertility due to spinal cord injury using rectal probe electroejaculation: the Israeli experience. Spinal Cord. 2001;39:168-75.
58. Ohl DA, Wolf LJ, Menge AC, Christman GM, Hurd WW, Ansbacher R, Smith YR, Randolph JF. Electroejaculation and assisted reproductive Technologies in the treatment of anejaculatory infertility. Fertil Steril. 2001;76:1249-55.
59. Gat I, Maman E, Yerushalmi G, Baum M, Dor J, Raviv G, Madjar I, Hourvitz A. Electroejaculation combined with intracytoplasmic sperm injection in patients with psychogenic anejaculation yields comparable results to patients with spinal cord injuries. Fertil Steril. 2012;97:1056-60.
60. Hovav Y, Yaffe H, Zentner B, Dan-Goor M, Almagor M. The use of ICSI with fresh and cryopreserved electroejaculates from psychogenic anejaculatory men. Hum Reprod. 2002;17:390-2.
61. Hovav Y, Kafka I, Horenstein E, Yaffe H. Prostatic massage as a method for obtaining spermatozoa in men with psychogenic anejaculation. Fertil Steril. 2000;74:184-5.
62. Schatte EC, Orejuela FJ, Lipshultz LI, Kim ED, Lamb DJ. Treatment of infertility due to anejaculation in the male with electroejaculation and intracytoplasmic sperm injection. J Urol. 2000;163:1717-20.
63. Stün YEU, Korkmaz C, Duru NK, Başer I. Comparison of three sperm retrieval techniques in spinal cord-injured men: pregnancy outcome. Gynecol Endocrinol. 2006;22:252-5.
64. da Silva BF, Borrelli M Jr, Fariello RM, Restelli AE, Del Giudice PT, Spaine DM, Bertolla RP, Cedenho AP. Is sperm cryopreservation an option for fertility preservation in patients with spinal cord-injured men: pregnancy outcome. Gynecol Endocrinol. 2006;22:252-5.
65. Qiu Y, Wang SM, Yang DT, Wang LG. Percutaneous vasal sperm aspiration and intrauterine insemination for infertile males with anejaculation. Fertil Steril. 2003;79:6618-20.

66. Chiang H, Liu Cİ, Tzeng C, Wei H. Noscalpel vasal sperm aspiration and in vitro fertilization fort he treatment of anejaculation. Urology. 2000;55:918-21.
67. Lin YH, Hwang JL, Tsai YL. Percutaneous epididymal sperm aspiration in psychogenic anejaculation during IVF. A report of two cases. J Reprod Med. 1999;44:894-6.
68. Holstege G, Georgiadis JR, Paans AM, et al. Brain activation during human male ejaculation. J Neuroci. 2003;23:9185.
69. Lindley EM, McBeth ZL, Henry SE, Cooley R, Burger EL, Cain CM, Patel VV. Retrograde ejaculation after anterior lumbar spine surgery. Spine (Phila Pa 1976). 2012;37:1785-9.
70. Brackett NL, Ohl AD, Sonksen J, Lynne CM. Abnormalities of ejaculation, Edit:Lipshultz L, Howards S, 4th Edition, Infertility in the male, Cambridge Univ Press. 2009;454.
71. Fedder J, Kaspersen MD, Brandslund I, Hojgaard A. Retrograde ejaculation sexual dysfunction in men with diabetes mellitus: a prospective, controlled study. Andrology. 2013 Apr 18. Doi:10.1111/j.2047-2927.2013.00083.x.
72. Arafa M, El Tabie O. Medical treatment of retrograde ejaculation in diabetic patients:a hop efor spontaneous pregnancy. J Sex Med. 2008;5:194-8.
73. Okada H, Fujioka H, Tatsumi N, Kanzaki M, Inaba Y, Fujisawa M, Gohji K, Arakawa S, Kamidono S. Treatment of patients with retrograde ejaculation in the era of modern assisted reproduction technology. J Sex Med. 2008;5:194-8.
74. Nikolettos N, Al-Hasani S, Baukloh V, Schöpper B, Demirel LC, Baban N, Sturm R, Rudolf K, Tomalak K, Tinneberg HR, Diedrich K. The outcome of intracytoplasmic sperm injection in patients with retrograde ejaculation. Hum Reprod. 1999;14:2293-6.