

Bölüm 11

PRIAPİZM VE PRIAPİZME YAKLAŞIM

Doğukan SÖKMEN¹

GİRİŞ

Antik çağlardan tanrı Priapos' un erekte halde büyük penisi tıp literatüründeki priapizm teriminin mitolojik kaynağı oluşturmaktadır⁽¹⁾. Priapizm; cinsel uyarı olsun ve olmasın 4 saatten uzun süren tam veya kısmi ereksiyon halidir. Tıp literatüründe ilk kez 1845 yılında Tripe tarafından bildirilmiştir⁽²⁾. Priapizmin gerçek insidansı ve prevalansı net olarak bilinmemekle birlikte, bazı çalışmalarda yüz binde 0,3-1 olarak belirtilmiş olup⁽³⁾ ayrıca hastalık yaş aralığı 5-10 yıl ve 20-50 yıl olanlarda bimodal insidans pikine sahiptir⁽⁴⁾.

İskemik (venooklüzif, düşük akımlı), non-iskemik (arteriyel, yüksek akımlı), tekrarlayan (kekeme, aralıklı) olmak üzere üç tipi bulunmaktadır. Priapizme yaklaşımda en önemli basamak hangi tip olduğu ayırımına varılmasıdır. Anamnez ve fizik muayene bize bu ayırım konusunda ilk basamakta yardımcı olur. Devamında kan gazı analizi ve gerektiğinde radyolojik tetkiklerle tanı desteklenmelidir. Bu hususta hızlı davranılmalıdır. Özellikle iskemik tip düşünülen olgularda acil müdahale gerekliliği unutulmamalıdır.

İSKEMİK (VENOOKLÜZİF, DÜŞÜK AKIMLI) PRIAPİZM

İskemik priapizm, tüm priapizm durumlarının %95' inden fazlasını oluşturan en yaygın priapizm tipidir^(5,6). Klinik olarak eksik veya azalmış intra-kavernöz arteriyel girişle karakterize ağırlı sert bir ereksiyon olarak ortaya çıkar ve aşamalı olarak hipoksi, hiperkapni, glukopeni ve asidoza gerçekleşir⁽⁷⁾. Dört saatten fazla süren iskemik priapizm, korpora kavernozanın kapalı alanı içinde iskemi gelişimi ile karakterize edilen ve kavernöz dolaşımı ciddi şekilde tehlikeye atan bir kompartman sendromuna benzer. Düz kas nekrozu, korporal fibrozis ve kalıcı erektil

1 Uzman Doktor, Memorial Bahçelievler Hastanesi, d.sokmen@hotmail.com

Anahtar Kelimeler: priapizm, iskemik priapizm, non-iskemik priapizm, tek-
rarlayan priapizm, şant, intrakavernozal enjeksiyon, penil protez

KAYNAKÇA

1. Guner E. Ithyphallic gods and their expressions Androl Bul 2019;21:155–160
2. Bochinski DJ, Deng DY, Lue TF. The treatment of priapism--when and how? Int J Impot Res 2003;15 Suppl 5:S86-90.
3. Shigehara K, Namiki M. Clinical management of priapism: a review. World J Mens Health 2016;34(1):1-8.
4. Cherian J, Rao AR, Thwaini A, Kapasi F, Shergill IS, Samman R. Medical and surgical management of priapism. Postgrad Med J 2006;82(964):89-94.
5. Berger, R., et al. Report of the American Foundation for Urologic Disease (AFUD) Thought Leader Panel for evaluation and treatment of priapism. Int J Impot Res, 2001. 13 Suppl 5: S39.
6. Broderick, G.A., et al. Priapism: pathogenesis, epidemiology, and management. J Sex Med, 2010. 7: 476.
7. Muneer, A., et al. Investigation of cavernosal smooth muscle dysfunction in low flow priapism using an in vitro model. Int J Impot Res, 2005. 17: 10.
8. El-Bahnasawy, M.S., et al. Low-flow priapism: risk factors for erectile dysfunction. BJU Int, 2002. 89: 285.
9. Spycher, M.A., et al. The ultrastructure of the erectile tissue in priapism. J Urol, 1986. 135: 142.
10. Zacharakis, E., et al. Penile prosthesis insertion in patients with refractory ischaemic priapism: early vs delayed implantation. BJU Int, 2014. 114: 576.
11. Pohl, J., et al. Priapism: a three-phase concept of management according to aetiology and prognosis. Br J Urol, 1986. 58: 113.
12. Nelson, J.H., 3rd, et al. Priapism: evolution of management in 48 patients in a 22-year series. J Urol, 1977. 117: 455.
13. Ateyah, A., et al. Intracavernosal irrigation by cold saline as a simple method of treating iatrogenic prolonged erection. J Sex Med, 2005. 2: 248.
14. Bivalacqua, T.J., et al. New insights into the pathophysiology of sickle cell disease-associated priapism. J Sex Med, 2012. 9: 79.
15. Lagoda, G., et al. Molecular analysis of erection regulatory factors in sickle cell disease associated priapism in the human penis. J Urol, 2013. 189: 762.
16. Alwaal, A., et al. Future prospects in the treatment of erectile dysfunction: focus on avanafil. Drug Des Devel Ther, 2011. 5: 435.
17. Bertolotto, M., et al. Color Doppler imaging of posttraumatic priapism before and after selective embolization. Radiographics, 2003. 23: 495.
18. Hakim, L.S., et al. Evolving concepts in the diagnosis and treatment of arterial high flow priapism. J Urol, 1996. 155: 541.
19. Ralph, D.J., et al. The use of high-resolution magnetic resonance imaging in the management of patients presenting with priapism. BJU Int, 2010. 106: 1714.
20. Burnett, A.L., et al. Standard operating procedures for priapism. J Sex Med, 2013. 10: 180.
21. Roberts, J.R., et al. Intracavernous epinephrine: a minimally invasive treatment for priapism in the emergency department. J Emerg Med, 2009. 36: 285.
22. Keskin, D., et al. Intracavernosal adrenalin injection in priapism. Int J Impot Res, 2000. 12: 312.
23. Muneer, A., et al. Investigating the effects of high-dose phenylephrine in the management of prolonged ischaemic priapism. J Sex Med, 2008. 5: 2152.
24. Glina, S., et al. Modifying risk factors to prevent and treat erectile dysfunction. J Sex Med, 2013. 10: 115.
25. Bartolucci, P., et al. Clinical management of adult sickle-cell disease. Curr Opin Hematol, 2012. 19: 149.
26. Rogers, Z.R. Priapism in sickle cell disease. Hematol Oncol Clin North Am, 2005. 19: 917.

27. Burnett, A.L. Surgical management of ischemic priapism. *J Sex Med*, 2012. 9: 114.
28. Bennett, N., et al. Sickle cell disease status and outcomes of African-American men presenting with priapism. *J Sex Med*, 2008. 5: 1244.
29. Nixon, R.G., et al. Efficacy of shunt surgery for refractory low flow priapism: a report on the incidence of failed detumescence and erectile dysfunction. *J Urol*, 2003. 170: 883.
30. Zacharakis, E., et al. The efficacy of the T-shunt procedure and intracavernous tunneling (snake maneuver) for refractory ischemic priapism. *J Urol*, 2014. 191: 164.
31. Lue, T.F., et al. Distal cavernosum-glans shunts for ischemic priapism. *J Sex Med*, 2006. 3: 749.
32. Winter, C.C. Cure of idiopathic priapism: new procedure for creating fistula between glans penis and corpora cavernosa. *Urology*, 1976. 8: 389.
33. Macaluso, J.N., Jr., et al. Priapism: review of 34 cases. *Urology*, 1985. 26: 233.
34. Ebbehøj, J. A new operation for priapism. *Scand J Plast Reconstr Surg*, 1974. 8: 241.
35. Lund, K., et al. Results of glando-cavernous anastomosis in 18 cases of priapism. *Scand J Plast Reconstr Surg*, 1980. 14: 269.
36. Brant, W.O., et al. T-shaped shunt and intracavernous tunneling for prolonged ischemic priapism. *J Urol*, 2009. 181: 1699.
37. Ercole, C.J., et al. Changing surgical concepts in the treatment of priapism. *J Urol*, 1981. 125: 210.
38. Hanafy, H.M., et al. Ancient Egyptian medicine: contribution to urology. *Urology*, 1974. 4: 114.
39. Burnett, A.L., et al. Corporal "snake" maneuver: corporoglanular shunt surgical modification for ischemic priapism. *J Sex Med*, 2009. 6: 1171.
40. Segal, R.L., et al. Corporal Burnett "Snake" surgical maneuver for the treatment of ischemic priapism: long-term followup. *J Urol*, 2013. 189: 1025.
41. Quackels, R. [Treatment of a case of priapism by cavernospongious anastomosis]. *Acta Urol Belg*, 1964. 32: 5.
42. Grayhack, J.T., et al. Venous bypass to control priapism. *Invest Urol*, 1964. 1: 509.
43. Kandel, G.L., et al. Pulmonary embolism: a complication of corpus-saphenous shunt for priapism. *J Urol*, 1968. 99: 196.
44. Kihl, B., et al. Priapism: evaluation of treatment with special reference to saphenocavernous shunting in 26 patients. *Scand J Urol Nephrol*, 1980. 14: 1.
45. Ralph, D.J., et al. The immediate insertion of a penile prosthesis for acute ischaemic priapism. *Eur Urol*, 2009. 56: 1033.
46. Zacharakis, E., et al. Early insertion of a malleable penile prosthesis in ischaemic priapism allows later upsizing of the cylinders. *Scan J Urol*, 2015. 26: 1.
47. Burnett, A.L., et al. Evaluation of erectile function in men with sickle cell disease. *Urology*, 1995. 45: 657.
48. Hatzichristou, D., et al. Management strategy for arterial priapism: therapeutic dilemmas. *J Urol*, 2002. 168: 2074.
49. Witt, M.A., et al. Traumatic laceration of intracavernosal arteries: the pathophysiology of non-ischemic, high flow, arterial priapism. *J Urol*, 1990. 143: 129.
50. Kuefer, R., et al. Changing diagnostic and therapeutic concepts in high-flow priapism. *Int J Impot Res*, 2005. 17: 109.
51. Steers, W.D., et al. Use of methylene blue and selective embolization of the pudendal artery for high flow priapism refractory to medical and surgical treatments. *J Urol*, 1991. 146: 1361.
52. Ricciardi, R., Jr., et al. Delayed high flow priapism: pathophysiology and management. *J Urol*, 1993. 149: 119.
53. Dubocq, F.M., et al. High flow malignant priapism with isolated metastasis to the corpora cavernosa. *Urology*, 1998. 51: 324.
54. Inamoto, T., et al. A rare case of penile metastasis of testicular cancer presented with priapism. *Hinyokika Kiyo*, 2005. 51: 639.
55. Todd, N.V. Priapism in acute spinal cord injury. *Spinal Cord*, 2011. 49: 1033.
56. Lutz, A., et al. Conversion of low-flow to high-flow priapism: a case report and review (CME).

J Sex Med, 2012. 9: 951.

57. McMahon, C.G. High flow priapism due to an arterial-lacunar fistula complicating initial veno-occlusive priapism. *Int J Impot Res*, 2002. 14: 195.
58. Karagiannis, A.A., et al. High flow priapism secondary to internal urethrotomy treated with embolization. *J Urol*, 2004. 171: 1631.
59. Liguori, G., et al. High-flow priapism (HFP) secondary to Nesbit operation: management by percutaneous embolization and colour Doppler-guided compression. *Int J Impot Res*, 2005. 17: 304.
60. Ramos, C.E., et al. High flow priapism associated with sickle cell disease. *J Urol*, 1995. 153: 1619.
61. Arango, O., et al. Complete resolution of post-traumatic high-flow priapism with conservative treatment. *Int J Impot Res*, 1999. 11: 115.
62. Ilkay, A.K., et al. Conservative management of high-flow priapism. *Urology*, 1995. 46: 419.
63. Mwamukonda, K.B., et al. Androgen blockade for the treatment of high-flow priapism. *J Sex Med*, 2010. 7: 2532.
64. Zacharakis, E., et al. Distal corpus cavernosum fibrosis and erectile dysfunction secondary to non-ischaemic priapism. *Arch Ital Urol Androl*, 2015. 87: 258.
65. Adeyolu, A.B., et al. Priapism in sickle-cell disease; incidence, risk factors and complications - an international multicentre study. *BJU Int*, 2002. 90: 898.
66. Fowler, J.E., Jr., et al. Priapism associated with the sickle cell hemoglobinopathies: prevalence, natural history and sequelae. *J Urol*, 1991. 145: 65.
67. Mantadakis, E., et al. Prevalence of priapism in children and adolescents with sickle cell anemia. *J Pediatr Hematol Oncol*, 1999. 21: 518.
68. Morrison, B.F., et al. Stuttering priapism: insights into pathogenesis and management. *Curr Urol Rep*, 2012. 13: 268.
69. Roizenblatt, M., et al. Priapism is associated with sleep hypoxemia in sickle cell disease. *J Urol*, 2012. 188: 1245.
70. Montague, D.K., et al. American Urological Association guideline on the management of priapism. *J Urol*, 2003. 170: 1318.
71. Mocniak, M., et al. The use of sudafed for priapism in pediatric patients with sickle cell disease. *J Pediatr Nurs*, 2012. 27: 82.
72. Gbadoe, A.D., et al. Management of sickle cell priapism with etilefrine. *Arch Dis Child*, 2001. 85: 52.
73. Okpala, I., et al. Etilefrine for the prevention of priapism in adult sickle cell disease. *Br J Haematol*, 2002. 118: 918.
74. Levine, L.A., et al. Gonadotropin-releasing hormone analogues in the treatment of sickle cell anemia-associated priapism. *J Urol*, 1993. 150: 475.
75. Rachid-Filho, D., et al. Treatment of recurrent priapism in sickle cell anemia with finasteride: a new approach. *Urology*, 2009. 74: 1054.
76. DeCastro, B.J., et al. Oral ketoconazole for prevention of postoperative penile erection: a placebo controlled, randomized, double-blind trial. *J Urol*, 2008. 179: 1930.
77. Gupta, S., et al. A possible mechanism for alteration of human erectile function by digoxin: inhibition of corpus cavernosum sodium/potassium adenosine triphosphatase activity. *J Urol*, 1998. 159: 1529.
78. Daoud, A.S., et al. The effect of Vigabatrin, Lamotrigine and Gabapentin on the fertility, weights, sex hormones and biochemical profiles of male rats. *Neuro Endocrinol Lett*, 2004. 25: 178.
79. Perimenis, P., et al. Gabapentin in the management of the recurrent, refractory, idiopathic priapism. *Int J Impot Res*, 2004. 16: 84.