

BÖLÜM 16

Varikosel

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GİRİŞ

Varikosel, testiküler venöz kan akımının reflüsü ile beraber her iki veya tek testiste venöz pampiniform pleksusun anormal genişlemesini ifade eder (1). Varikosel erkek infertilitesi, aynı taraf testiste büyümeye ve gelişme geriliği, ağrı ve hipogonadizimle alakalıdır. Varikosel tüm toplumda erkeklerin %15-20'sinde bulunurken, infertil erkeklerin %40'ında bulunur (2, 3). Varikoselin prevalansı yaşla birlikte artmaktadır. Ülkemizde 40 yaşı üzeri erkekler üzerinde yapılan bir çalışmada varikosel prevalansı %48 olarak bulunmuştur. Toplam 224 varikosel hastasının aldığı çalışmada bilateral varikosel 120 hastada görülmüştür. Grade 3 varikosel görülme oranı %13,3, Grade 2 varikosel görülme oranı %21,1 ve Grade 1 varikosel görülme oranı %13,6'dır (4).

Pampiniform pleksusun anatomisi

Varikosel genelde sol tarafta izlenir. Testiküler venler testisten köken alır ve pleksus pampiniformise dallar verir. Pleksus pampiniformis spermatik kort içerisinde inguinal kanaldan geçerek abdomene girer. Sağ spermatik ven direkt olarak inferior vena kavaya düşük bir basınçla açılır. Sol spermatik ven ise daha yüksek

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Profilaktik varikoselektomi

Adölesanlarda varikoselektomi pek çok vakada aşırı tedavi şekli olabilir. Çünkü adölesan varikoseli ile infertilite arasındaki ilişki şüphelidir ve bu hastalar ilerde kolay yönden çocuk sahibi olabilir. Bu nedenle profilaktik varikoselektomi, yalnızca seri klinik muayene veya Doppler ultrasonografi incelemelerinde ve/veya düzensiz semen analizi bulguları ile ispatlanan testis hipotrofisi olan durumlarda önerilir (31, 34).

KAYNAKLAR

1. Bertolotto M, Cantisani V, Drudi FM, Lotti F. Varicocoele. Classification and pitfalls. Andrology. 2021;9 (5):1322-1330.
2. Clavijo RI, Carrasquillo R, Ramasamy R. Varicoceles: prevalence and pathogenesis in adult men. Fertil Steril. 2017;108:364-369.
3. Lotti F, Maggi M. Ultrasound of the male genital tract in relation to male reproductive health. Hum Reprod Update. 2015;21:56-83.
4. Besiroglu H, Otunctemur A, Dursun M, Ozbek E. The prevalence and severity of varicocele in adult population over the age of forty years old: a cross-sectional study. Aging Male. 2019;22 (3):207-213.
5. Leslie SW, Sajjad H, Siref LE. Varicocele. 2021. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021.
6. Arafa M, Henkel R, Agarwal A, Majzoub A, Elbardisi H. Correlation of oxidation-reduction potential with hormones, semen parameters and testicular volume. Andrologia. 2019;51 (5):e13258.
7. Reesink DJ, Huisman PM, Wiltink J, Boeken Kruger AE, Lock TMTW. Sneeze and pop: a ruptured varicocele; analysis of literature, guided by a well-documented case-report. BMC Urol. 2019;19 (1):14.
8. Parekh N, Sabanegh E. (2019). Anatomic Theories of Varicocele Origin. In: Esteves S, Cho CL, Majzoub A, Agarwal A. (eds) Varicocele and Male Infertility. Springer, Cham.
9. Santana VP, Miranda-Furtado CL, dos Reis RM (2019). Genetics and Epigenetics of Varicocele Pathophysiology. In: Esteves S, Cho CL, Majzoub A, Agarwal A. (eds) Varicocele and Male Infertility. Springer, Cham.
10. Dubin L, Amelar RD. Varicocele size and results of varicocelectomy in selected subfertile men with varicocele. Fertil Steril. 1970;21:606-609.
11. Bertolotto M, Freeman S, Richenberg J, et al. Ultrasound evaluation of varicoceles: systematic literature review and rationale of the ESUR-SPIWG Guidelines and Recommendations. J Ultrasound. 2020;23:487-507.
12. Freeman S, Bertolotto M, Richenberg J, et al. Ultrasound evaluation of varicoceles: guidelines and recommendations of the European Society of Urogenital Radiology Scrotal and Penile Imaging Working Group (ESUR-SPIWG) for detection, classification, and grading. Eur Radiol. 2020;30:11-25.

13. Sarteschi LM, Paoli R, Bianchini M, Menchini Fabris GF. Lo studio del varicocele con eco-color-Doppler. *G Ital Ultrasonologia.* 1993;4:43-49.
14. Liguori G, Trombetta C, Garaffa G, et al. Color Doppler ultrasound investigation of varicocele. *World J Urol.* 2004;22:378-381.
15. WHO, WHO Manual for the Standardized Investigation and Diagnosis of the Infertile Couple. 2000, Cambridge University Press: Cambridge.
16. Practice Committee of the American Society for Reproductive Medicine; Society for Male Reproduction and Urology. Report on varicocele and infertility: a committee opinion. *Fertil Steril.* 2014;102 (6):1556-60.
17. Sakamoto H, Saito K, Oohta M, Inoue K, Ogawa Y, Yoshida H. Testicular volume measurement: comparison of ultrasonography, orchidometry, and water displacement. *Urology.* 2007;69 (1):152-7.
18. Minhas S, Bettocchi C, Boeri L, Capogrosso P, Carvalho J, Cilesiz NC, Coccia A, Corona G, Dimitropoulos K, Güllü M, Hatzichristodoulou G, Jones TH, Kadioglu A, Martínez Salamanca JI, Milenkovic U, Modgil V, Russo GI, Serefoglu EC, Tharakan T, Verze P, Salonia A; EAU Working Group on Male Sexual and Reproductive Health. European Association of Urology Guidelines on Male Sexual and Reproductive Health: 2021 Update on Male Infertility. *Eur Urol.* 2021 Nov;80 (5):603-620.
19. Jensen CFS, Østergren P, Dupree JM, Ohl DA, Sønksen J, Fode M. Varicocele and male infertility. *Nat Rev Urol.* 2017;14 (9):523-533.
20. Wadhwa V, Kashanian JA, Schiffman M, McClure TD. Varicocele Embolization: Patient Selection: Preprocedure Workup, and Technical Considerations. *Semin Intervent Radiol.* 2021;38 (2):176-181.
21. Cho CL, Esteves SC, Agarwal A. Indications and outcomes of varicocele repair. *Panminerva Med.* 2019;61 (2):152-163.
22. Baek SR, Park HJ, Park NC. Comparison of the clinical characteristics of patients with varicocele according to the presence or absence of scrotal pain. *Andrologia.* 2019;51 (2):e13187.
23. Yamamoto M, Hibi H, Hirata Y, Miyake K, Ishigaki T. Effect of varicocelectomy on sperm parameters and pregnancy rate in patients with subclinical varicocele: a randomized prospective controlled study. *J Urol.* 1996;155 (5):1636-8.
24. Kroese AC, de Lange NM, Collins J, Evers JL. Surgery or embolization for varicoceles in subfertile men. *Cochrane Database Syst Rev.* 2012 Oct 17;10:CD000479. doi: 10.1002/14651858.CD000479.pub5. Update in: *Cochrane Database Syst Rev.* 2021;4:CD000479.
25. Bryniarski P, Taborowski P, Rajwa P, Kaletka Z, Życzkowski M, Paradysz A. The comparison of laparoscopic and microsurgical varicocelectomy in infertile men with varicocele on paternity rate 12 months after surgery: a prospective randomized controlled trial. *Andrology.* 2017;5 (3):445-450.
26. Machen GL, Johnson D, Nissen MA, Naber E, Sandlow JI. Time to improvement of semen parameters after microscopic varicocelectomy: When it occurs and its effects on fertility. *Andrologia.* 2020;52 (2):e13500.
27. Pazir Y, Erdem S, Cilesiz NC, Kadioglu A. Determination of the time for improvement in semen parameters after varicocelectomy. *Andrologia.* 2021;53 (1):e13895.
28. Peng J, Zhang Z, Cui W, Yuan Y, Song W, Gao B, Xin Z, Zhu S. Spontaneous pregnancy rates in Chinese men undergoing microsurgical subinguinal varicocelectomy and possible preoperative factors affecting the outcomes. *Fertil Steril.* 2015;103 (3):635-9.

29. Sajadi H, Hosseini J, Farrahi F, Dadkhah F, Sepidarkish M, Sabbaghian M, Eftekhari-Yazdi P, Sadighi Gilani MA. Varicocelectomy May Improve Results for Sperm Retrieval and Pregnancy Rate in Non-Obstructive Azoospermic Men. *Int J Fertil Steril.* 2019;12 (4):303-305.
30. Esteves SC, Miyaoka R, Roque M, Agarwal A. Outcome of varicocele repair in men with nonobstructive azoospermia: systematic review and meta-analysis. *Asian J Androl.* 2016;18 (2):246-53.
31. Ding H, Tian J, Du W, Zhang L, Wang H, Wang Z. Open non-microsurgical, laparoscopic or open microsurgical varicocelectomy for male infertility: a meta-analysis of randomized controlled trials. *BJU Int.* 2012;110 (10):1536-42.
32. Kirby EW, Wiener LE, Rajanahally S, Crowell K, Coward RM. Undergoing varicocele repair before assisted reproduction improves pregnancy rate and live birth rate in azoospermic and oligospermic men with a varicocele: a systematic review and meta-analysis. *Fertil Steril.* 2016;106 (6):1338-1343.
33. Yan S, Shabbir M, Yap T, Homa S, Ramsay J, McEleny K, Minhas S. Should the current guidelines for the treatment of varicoceles in infertile men be re-evaluated? *Hum Fertil (Camb).* 2021;24 (2):78-92.
34. Locke JA, Noparast M, Afshar K. Treatment of varicocele in children and adolescents: A systematic review and meta-analysis of randomized controlled trials. *J Pediatr Urol.* 2017;13 (5):437-445.