

BÖLÜM 12



Üriner İnkontinansta Posterior Tibial Sinir Stimülasyonu

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GİRİŞ

Üriner inkontinans (Üİ), ICS (International Continence Society) tarafından “kişinin yaşam kalitesini olumsuz etkileyen, hijyenik ve sosyal bir problem olup, istem dışı idrarını tutamama olarak tanımlanmaktadır (1). Üİ'nin birçok tipi vardır fakat en sık görülenleri; stres üriner inkontinans, sıkışma tipi üriner inkontinans ve bu iki durumun beraber olduğu karışık tipte üriner inkontinansdır.

Bu bölümde sıkışma tipi üriner inkontinans hakkında konuşulacaktır.

Sıkışma tipi üriner inkontinans tedavisinde; medikal tedavi, konservatif tedavi, pelvik taban kas egzersizleri (PTKE), nöromodülasyon, gibi tedavi seçenekleri bulunmaktadır (2-7).

AUA (American Urological Association) / SUFU (Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction) 2019 kılavuzunda sıkışma tipi üriner inkontinans tedavisini 5 basamak halinde önermiştir.

1. Basamak: Davranış tedavileri

Hastanın davranış ve çevresel faktörlerini düzenleyerek Üİ semptomlarını iyileştirmeyi amaçlayan yöntemlerdir. İşeme günlüğü ve zamanlı işeme, işemenin

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KAYNAKLAR

1. Abrams P, Cardozo L, Fall M, Griffiths D, Rosier P, Ulmsten U, et al. The standardisation of terminology in lower urinary tract function: report from the standardisation sub-committee of the International Continence Society. *Urology* 2003;61(1):37-49.
2. Wibisono E, Rahardjo HE. Effectiveness of short term percutaneous tibial nerve stimulation for non-neurogenic overactive bladder syndrome in adults: A Meta-analysis. *ActaMedIndones* 2015;47(3):188-200.
3. Moosdorff-Steinhauser HF, Berghmans B. Effects of percutaneous tibial nerve stimulation on adult patients with overactive bladder syndrome: a systematic review. *Neurourol Urodynamics* 2013;32(3):206-214.
4. Burton C, Sajja A, Latthe PM. Effectiveness of percutaneous posterior tibial nerve stimulation for overactive bladder: A systematic review and metaanalysis. *Neurourology and urodynamics* 2012; 31:1206-1216.
5. Harmancı Ü. Urgeinkontinans ve mikstinkontinansta Biofeedbackpelvik taban kas eğitimi ve antimuskarinik ilaç tedavisinin karşılaştırmalı etkinliği. *Ürolojik Anabilim Dalı Tıpta Uzmanlık Tezi*. Eskişehir Osmangazi Üniversitesi, Eskişehir, 2010.
6. Greer JA, Smith AL, Arya LA. Pelvic floor muscle training for urgency urinary incontinence in women: a systematic review. *IntUrogynecol J*. 2012 ;23(6):687-697.
7. Siegel SW, Richardson DA, Miller KL, Karram MM, Blackwood NB, Sand PK, et al. Pelvic floor or electrical stimulation for the treatment of urge and mix edurinary incontinence in women. *Urology* 1997;50(6):934-940.
8. MacDiarmid SA, Peters KM, Shobeiri SA et al: Long-term durability of percutaneous tibial nerve stimulation for the treatment of overactive bladder. *J Urol* 2010; 183: 234
9. Chapple, C.R., et al. Randomized double-blind, active-controlled phase 3 study to assess 12-month safety and efficacy of mirabegron, a beta (3)-adrenoceptor agonist, in overactive bladder. *Eur Urol*, 2013. 63: 296.
10. Michel MC. Comparison of symptom severity and treatment response in patients with incontinent and overactive bladder. *EurUrol*. 2005; 48:110-115
11. Booth, J.A.-O., et al. The effectiveness of transcutaneous tibial nerve stimulation (TTNS) for adults with overactive bladder syndrome: A systematic review. *Neurourol Urodyn*, 2018. 37: 528.
12. Cohen, A.J., et al. Comparative Outcomes and Perioperative Complications of Robotic Vs Open Cystoplasty and Complex Reconstructions. *Urology*, 2016. 97: 172.
13. Stoller ML. Afferent nerve stimulation for pelvic floor dysfunction. *EurUrol* 1999; 35:16.
14. MacDiarmid S, Staskin DR, Lucente V, Kaaki B, Sharon English P, Gilling, et al. Feasibility of a fully implanted, nickel-sized and shaped Tibial nerve stimulator for the treatment of overactive bladder syndrome with urgency incontinence. *J Urol*. 2019;201(5):967-972. doi: 10.1016/j.juro.2018.10.017.
15. Arrabal-Polo MA, Palao-Yago F, Campon-Pacheco I, Martinez-Sanchez M, Zuluaga-Gomez A, Arrabal-Clinical efficacy in the treatment of 69 overactive bladder re-fractory to anticholinergics by posterior tibial nerve stimulation. *Korean J Urol* 2012;53(7):483-486.
16. Yoong W, Ridout AE, Damodaram M, Dadswell R. Neuromodulative treatment with percutaneous tibial nerve stimulation for intractable detrusor instability: Outcomes following a shortened 6-week protocol. *BJU Int* 2010; 106:1673-1676.
17. Nuhoğlu B, Fidan V, Ayyıldız A, Ersoy E, Germiyanoglu C. Stoller afferent nerve stimulation in woman with therapy resistant overactive bladder; a 1- year follow up. *Int Urogynecol J* 2006;17(3):204-207.
18. Van Balken M, Vergunst H, Bemelmans B. Prognostic factors for successful percutaneous tibial nerve stimulation. *Euro Urol* 2006;49(2):360-365.

ÜROJİNEKOLOJİDE VE KADIN İNKONTİNANSINDA GÜNCEL PERSPEKTİF

19. Preyer O, Umek W, Laml T, Bjelic-Radisic V, Gabriel B, Mittlboeck M, et al. Percutaneous tibial nerve stimulation versus tolterodine for overactive bladder in women: a randomised controlled trial. *Eur J Obstet Gynecol Reprod Biol* 2015; 191:51-56.
20. Vecchioli-Scaldazza C, Morosetti C, Berouz A, Giannubilo W, Ferrara V. Solifenacin succinate versus percutaneous tibial nerve stimulation in women with overactive bladder syndrome: results of a randomized controlled crossover study. *Gynecol Obst Invest* 2012;75(4):230-234.
21. Peters KM, MacDiarmid SA, Wooldridge LS, Leong FC, Shobeiri SA, Rovner ES, et al. Randomized trial of percutaneous tibial nerve stimulation versus extended-release tolterodine: results from the overactive bladder innovative therapy trial. *J Urol* 2009;182(3):1055-1061.
22. Peters KM, Carrico DJ, Perez-Marrero RA, Khan AU, Wooldridge LS, Davis GL, et al. Randomized trial of percutaneous tibial nerve stimulation versus sham efficacy in the treatment of overactive bladder syndrome: Results from the SUMI Trial. *J Urol* 2010; 183:1438-1443
23. F.C. Burkhard, J.L.H.R. Bosch, F. Cruz, G.E. Lemack, A.K. Nambiar, N. Thiruchelvam, et al. The European Association of Urology (EAU) Guidelines. EAU Guidelines on urinary incontinence in adults. In: EAU Guidelines, 2018.
24. Sancaktar M, Ceyhan ST, Akyol I, Muhcu M, Alanbay I, Atay V. The outcome of adding peripheral neuromodulation (stoller afferent neurostimulation) to anti-muscarinic therapy in women with severe overactive bladder. *Gynecol Endocrinol* 2010;26(10):729-732.
25. Karademir K, Baykal K, Sen B, Senkul T, Iseri C, Erden D. A peripheral neuromodulation technique for curing detrusor overactivity: Stoller afferent neurostimulation. *Scandinav J Urol Nephrol* 2005;39(3):230-233.
26. Peters KM, Carrico DJ, Wooldridge LS, Miller CJ, MacDiarmid SA. Percutaneous tibial nerve stimulation for the long-term treatment of overactive bladder: 3-year results of the STEP study. *J Urol* 2013;189(6):2194-2201.
27. Patidar N, Mittal V, Kumar M, Sureka SK, Arora S, Ansari MS. Transcutaneous posterior tibial nerve stimulation in pediatric overactive bladder: A preliminary report. *J Pediatr Urol* 2015;11(6): 351.e1-6.
28. Ammi M, Chautard D, Brassart E, Culty T, Azzouzi AR, Bigot P. Transcutaneous posterior tibial nerve stimulation: evaluation of a therapeutic option in the management of anticholinergic refractory overactive bladder. *Int Urogynecol J* 2014;25(8):1065-1609.
29. Booth J, Hagen S, McClurg D, Norton C, MacInnes C, Collins B, et al. A feasibility study of transcutaneous posterior tibial nerve stimulation for bladder and bowel dysfunction in elderly adults in residential care. *J Am Med Dir Assoc* 2013;14(4):270-274.
30. Manríquez V, Guzmán R, Naser M, Aguilera A, Narvaez S, Castro A, et al. Transcutaneous posterior tibial nerve stimulation versus extended release 71 oxybutynin in overactive bladder patients. A prospective randomized trial. *Eur J Obstet Gynecol Reprod Biol* 2016; 196:6-10.
31. Boudaoud N, Binet A, Line A, Chaouadi D, Jolly C, Fiquet CF, et al. Management of refractory overactive bladder in children by transcutaneous posterior tibial nerve stimulation: A controlled study. *J Pediatr Urol* 2015;11(3): 138.e1-10.
32. Schreiner L, Dos Santos TG, Knorst MR, Da Silva Filho IG. Randomized trial of transcutaneous tibial nerve stimulation to treat urge urinary incontinence in older women. *Int Urogynecol J* 2010;21(9):1065-1070.
33. Ramírez-García I, Blanco-Ratto L, Kauffmann S, Carralero-Martínez A, Sánchez E. Efficacy of transcutaneous stimulation of the posterior tibial nerve compared to percutaneous stimulation in idiopathic overactive bladder syndrome: Randomized control trial. *Neurourol Urodyn* 2019;38(1):261-268.