

# BÖLÜM 10

## ÇOCUK VE ERGENLERDE NARKOLEPSİ

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### Giriş

Narkolepsi, klinik bir tablo olarak ilk defa 1877 yılında, Almanya'da Westphal ve 1880 yılında Fransa'da Gélineau tarafından bildirilmiştir (1). Bu klinik tablo, gündüz aşırı uykululuk hâli ile giden bir nörolojik bozukluk olarak tanımlanmıştır. Ayrıca narkolepsi tanılı hastaların üçte ikisine yakını, ani duygusal durumlar (öfke, kahkaha vb.) ile tetiklenen katapleksi (kas tonusunda azalma) yaşamaktadır ve bu durum gündüz aşırı uykululuk hâline en sık eşlik eden bulgudur (2-4). Bununla birlikte narkolepsi tanılı hastalarda eş zamanlı uykı paralizisi, hipnogojik ve hipnopompik halüsünasyonlar, parçalanmış gece uykusu da sık olarak görülmektedir (4). Narkolepsi başlangıç yaşının, sıkılıkla ergenlik dönemi olması ve diğer psikiyatrik durumlar ile belirtilerinin sık karışabilmesi, diğer psikiyatrik hastalıklara eşlik edebilmesi nedeni ile dikkate alınması gereken önemli bir uykı bozukluğuudur.

### Tanım

Gündüz aşırı uykululuk hâli, narkolepsinin çocuk ve ergenlerde en sık ve genellikle ilk görülen bulgusudur (5, 6). Çocuk ve ergen narkolepsisinde, erişkin narkolepsisinden farklı olarak gündüz aşırı uykululuk hâlinde, gündüz uyuşmaları daha uzun süreli ve daha az dinlendirici olabilmektedir (7, 8). Katapleksi, narkolepsiye aşırı uykululuk halinden daha fazla özgün bir klinik durumdur (9). Çocuk

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Narkoleptik hastalarda IVIG, sistemik steroid ve plazmaferez ile ilgili çalışmalar mevcuttur. Yapılan çalışmalarda, sistemik steroid ve plazmeferez etkisiz bulunmuştur (67, 68). IVIG tedavisi açısından bakıldığından ise etkili olduğu bildiren çalışmalar olmakla birlikte genel anlamda bu çalışmaların deseni, vaka sayısı yeterli değildir ve bu konuda daha fazla çalışmaya ihtiyaç vardır (52, 69).

## Sonuç

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Narkolepsi başlangıç yaşının sıkılıkla ergenlik dönemi olması ve belirtilerinin diğer psikiyatrik durumlar ile sık karışabilmesi, diğer psikiyatrik hastalıklara eşlik edebilmesi nedeni ile dikkate alınması gereken, önemli bir uyku bozukluğuudur. Tanının gecikmesi, çocuk ve ergenlerin akademik becerilerini, günlük sosyal yaşam kalitesini bozmaktadır. Bu nedenle, uyku bozukluğu şikayetleri ile çocuk ve ergen ruh sağlığı kliniğine başvuran tüm çocuk ve ergenlerde akılda tutulmalıdır.

## Kaynaklar

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1. Schenck CH, Bassetti CL, Arnulf I, Mignot E. English translations of the first clinical reports on narcolepsy and cataplexy by Westphal and Gélineau in the late 19th century, with commentary. *Journal of Clinical Sleep Medicine*. 2007;3(3):301-11.
2. Bassetti CL, Adamantidis A, Burdakov D, Han F, Gay S, Kallweit U, et al. Narcolepsy—clinical spectrum, aetiopathophysiology, diagnosis and treatment. *Nature Reviews Neurology*. 2019;15(9):519-39.
3. Dye TJ, Gurbani N, Simakajornboon N. Epidemiology and pathophysiology of childhood narcolepsy. *Paediatric respiratory reviews*. 2018;25:14-8.
4. Plazzi G, Clawges HM, Owens JA. Clinical characteristics and burden of illness in pediatric patients with narcolepsy. *Pediatric neurology*. 2018;85:21-32.
5. Aran A, Einen M, Lin L, Plazzi G, Nishino S, Mignot E. Clinical and therapeutic aspects of childhood narcolepsy-cataplexy: a retrospective study of 51 children. *Sleep*. 2010;33(11):1457-64.
6. Vendrame M, Havaligi N, Matadeen-Ali C, Adams R, Kothare SV. Narcolepsy in children: a single-center clinical experience. *Pediatric neurology*. 2008;38(5):314-20.
7. Kotagal S, Paruthi S. Narcolepsy in childhood. *Narcolepsy*: Springer; 2010. p. 55-67.
8. Nevsimalova S. Narcolepsy in childhood. *Sleep medicine reviews*. 2009;13(2):169-80.
9. Swick TJ. Treatment paradigms for cataplexy in narcolepsy: past, present, and future. *Nature and science of sleep*. 2015;7:159.
10. Serra L, Montagna P, Mignot E, Lugaresi E, Plazzi G. Cataplexy features in childhood narcolepsy. *Movement disorders*. 2008;23(6):858-65.
11. Edition F. Diagnostic and statistical manual of mental disorders. Am Psychiatric Assoc. 2013;21.
12. Kallambella K, Hussain N. Approach to a child with excessive daytime sleepiness. *Archives of Disease in Childhood-Education and Practice*. 2015;100(6):288-94.
13. Sateia MJ. International classification of sleep disorders. *Chest*. 2014;146(5):1387-94.
14. Rocca FL, Pizza F, Ricci E, Plazzi G. Narcolepsy during childhood: an update. *Neuropediatrics*. 2015;46(03):181-98.



15. Hale L, Guan S, Emanuele E. Epidemiology of narcolepsy. *Narcolepsy*: Springer; 2016. p. 37-43.
16. Shin Y, Yoon I-Y, Han E, No Y, Hong M, Yun Y, et al. Prevalence of narcolepsy-cataplexy in Korean adolescents. *Acta neurologica scandinavica*. 2008;117(4):273-8.
17. Silber MH, Krahn LE, Olson EJ, Pankratz VS. The epidemiology of narcolepsy in Olmsted County, Minnesota: a population-based study. *Sleep*. 2002;25(2):197-202.
18. Sarkannen TO, Alakuijala AP, Dauvilliers YA, Partinen MM. Incidence of narcolepsy after H1N1 influenza and vaccinations: Systematic review and meta-analysis. *Sleep medicine reviews*. 2018;38:177-86.
19. Wu H, Zhuang J, Stone W, Zhang L, Wang Z, Yang Y, et al. Symptoms and occurrences of narcolepsy: A retrospective study of 162 patients during a10-year period in Eastern China. *Sleep Medicine*. 2015(16):S55.
20. Wijnans L, Lecomte C, de Vries C, Weibel D, Sammon C, Hviid A, et al. The incidence of narcolepsy in Europe: before, during, and after the influenza A (H1N1) pdm09 pandemic and vaccination campaigns. *Vaccine*. 2013;31(8):1246-54.
21. Oberle D, Drechsel-Bäuerle U, Schmidtmann I, Mayer G, Keller-Stanislawska B. Incidence of narcolepsy in Germany. *Sleep*. 2015;38(10):1619-28.
22. Partinen M, Saarenpää-Heikkilä O, Ilveskoski I, Hublin C, Linna M, Olsén P, et al. Increased incidence and clinical picture of childhood narcolepsy following the 2009 H1N1 pandemic vaccination campaign in Finland. *PloS one*. 2012;7(3):e33723.
23. Longstreth Jr W, Ton TG, Koepsell T, Gersuk VH, Hendrickson A, Velde S. Prevalence of narcolepsy in king county, washington, USA. *Sleep medicine*. 2009;10(4):422-6.
24. Shibata M, Mondal MS, Date Y, Nakazato M, Suzuki H, Ueta Y. Distribution of orexins-containing fibers and contents of orexins in the rat olfactory bulb. *Neuroscience research*. 2008;61(1):99-105.
25. Mignot EJ. History of narcolepsy at Stanford University. *Immunologic research*. 2014;58(2-3):315-39.
26. Mignot E, Lin L, Rogers W, Honda Y, Qiu X, Lin X, et al. Complex HLA-DR and-DQ interactions confer risk of narcolepsy-cataplexy in three ethnic groups. *The American Journal of Human Genetics*. 2001;68(3):686-99.
27. Dauvilliers Y, Arnulf I, Mignot E. Narcolepsy with cataplexy. *The Lancet*. 2007;369(9560):499-511.
28. Mignot E, Hayduk R, Black J, Grumet F, Guilleminault C. HLA DQB1\* 0602 is associated with cataplexy in 509 narcoleptic patients. *Sleep*. 1997;20(11):1012-20.
29. Han F, Lin L, Li J, Aran A, Dong SX, An P, et al. TCRA, P2RY11, and CPT1B/CHKB associations in Chinese narcolepsy. *Sleep medicine*. 2012;13(3):269-72.
30. Miyagawa T, Kawashima M, Nishida N, Ohashi J, Kimura R, Fujimoto A, et al. Variant between CPT1B and CHKB associated with susceptibility to narcolepsy. *Nature genetics*. 2008;40(11):1324-8.
31. Singh AK, Mahlios J, Mignot E. Genetic association, seasonal infections and autoimmune basis of narcolepsy. *Journal of autoimmunity*. 2013;43:26-31.
32. Longstreth Jr W, Koepsell TD, Ton TG, Hendrickson AF, Van Belle G. The epidemiology of narcolepsy. *Sleep*. 2007;30(1):13-26.
33. Ahmed SS, Schur PH, MacDonald NE, Steinman L. Narcolepsy, 2009 A (H1N1) pandemic influenza, and pandemic influenza vaccinations: what is known and unknown about the neurological disorder, the role for autoimmunity, and vaccine adjuvants. *Journal of autoimmunity*. 2014;50:1-11.
34. Dauvilliers Y, Montplaisir J, Cochen V, Desautels A, Einen M, Lin L, et al. Post-H1N1 narcolepsy-cataplexy. Oxford University Press; 2010.



35. Feltelius N, Persson I, Ahlqvist-Rastad J, Andersson M, Arnheim-Dahlström L, Bergman P, et al. A coordinated cross-disciplinary research initiative to address an increased incidence of narcolepsy following the 2009–2010 Pandemrix vaccination programme in Sweden. *Journal of internal medicine*. 2015;278(4):335-53.
36. Hallberg P, Smedje H, Eriksson N, Kohnke H, Daniilidou M, Öhman I, et al. Pandemrix-induced narcolepsy is associated with genes related to immunity and neuronal survival. *EBioMedicine*. 2019;40:595-604.
37. Nohynek H, Jokinen J, Partinen M, Vaarala O, Kirjavainen T, Sundman J, et al. AS03 adjuvanted AH1N1 vaccine associated with an abrupt increase in the incidence of childhood narcolepsy in Finland. *PloS one*. 2012;7(3):e33536.
38. Aran A, Lin L, Nevsimalova S, Plazzi G, Hong SC, Weiner K, et al. Elevated anti-streptococcal antibodies in patients with recent narcolepsy onset. *Sleep*. 2009;32(8):979-83.
39. Fontana A, Gast H, Reith W, Recher M, Birchler T, Bassetti CL. Narcolepsy: autoimmunity, effector T cell activation due to infection, or T cell independent, major histocompatibility complex class II induced neuronal loss? *Brain*. 2010;133(5):1300-11.
40. Scammell TE. Narcolepsy. *New England Journal of Medicine*. 2015;373(27):2654-62.
41. Tió E, Gaig C, Giner-Soriano M, Romero O, Jurado MJ, Sansa G, et al. The prevalence of narcolepsy in Catalunya (Spain). *Journal of sleep research*. 2018;27(5):e12640.
42. Babiker MO, Prasad M. Narcolepsy in children: a diagnostic and management approach. *Pediatric neurology*. 2015;52(6):557-65.
43. Baumann CR, Mignot E, Lammers GJ, Overeem S, Arnulf I, Rye D, et al. Challenges in diagnosing narcolepsy without cataplexy: a consensus statement. *Sleep*. 2014;37(6):1035-42.
44. Nevsimalova S, Pisko J, Buskova J, Kemlink D, Prihodova I, Sonka K, et al. Narcolepsy: clinical differences and association with other sleep disorders in different age groups. *Journal of neurology*. 2013;260(3):767-75.
45. Antelmi E, Pizza F, Vandi S, Neccia G, Ferri R, Bruni O, et al. The spectrum of REM sleep-related episodes in children with type 1 narcolepsy. *Brain*. 2017;140(6):1669-79.
46. Cohen A, Mandrekar J, Louis EKS, Silber MH, Kotagal S. Comorbidities in a community sample of narcolepsy. *Sleep medicine*. 2018;43:14-8.
47. Ohayon MM. Narcolepsy is complicated by high medical and psychiatric comorbidities: a comparison with the general population. *Sleep medicine*. 2013;14(6):488-92.
48. Johns MW. A new method for measuring daytime sleepiness: the Epworth sleepiness scale. *sleep*. 1991;14(6):540-5.
49. Ağargün M, Çilli A, Kara H, Bilici M, Telcioğlu M, Semiz Ü, et al. Epworth uykululuk ölçüğünün geçerliği ve güvenirligi. *Türk Psikiyatri Dergisi*. 1999;10(4):261-7.
50. Yılmaz K. Güncel Bilgiler Işığında Narkolepsi. *Journal of Turkish Sleep Medicine*. 2015;1:1-6.
51. Erdem M, Abdullah B, Ünlü AG, Alper M, Yetkin S. Comparison of Polysomnography and Multiple Sleep Latency Test Findings in Subjects with Narcolepsy and Idiopathic Hypersomnia. *Nöro Psikiyatri Arşivi*. 2013;50(3):252.
52. Postiglione E, Antelmi E, Pizza F, Lecendreux M, Dauvilliers Y, Plazzi G. The clinical spectrum of childhood narcolepsy. *Sleep medicine reviews*. 2018;38:70-85.
53. Fortuyn HD, Lappenschaar MA, Furer JW, Hodiamont PP, Cees AT, Renier WO, et al. Anxiety and mood disorders in narcolepsy: a case-control study. *General hospital psychiatry*. 2010;32(1):49-56.



54. Guilleminault C, Pelayo R. Narcolepsy in children. *Pediatric drugs.* 2000;2(1):1-9.
55. Fortuyn HD, Mulders P, Renier W, Buitelaar J, Overeem S. Narcolepsy and psychiatry: an evolving association of increasing interest. *Sleep medicine.* 2011;12(7):714-9.
56. Kanbayashi T, Sagawa Y, Takemura F, Ito S-U, Tsutsui K, Hishikawa Y, et al. The pathophysiological basis of secondary narcolepsy and hypersomnia. *Current neurology and neuroscience reports.* 2011;11(2):235-41.
57. Armangue T, Santamaria J, Dalmau J. When a serum test overrides the clinical assessment. *Neurology.* 2015;84(13):1379-81.
58. Pizza F, Vandi S, Poli F, Moghadam KK, Franceschini C, Bellucci C, et al. Narcolepsy with cataplexy mimicry: the strange case of two sisters. *Journal of Clinical Sleep Medicine.* 2013;9(6):611-2.
59. Plazzi G, Khatami R, Serra L, Pizza F, Bassetti CL. Pseudocataplexy in narcolepsy with cataplexy. *Sleep medicine.* 2010;6(11):591-4.
60. Esposito S, Bianchini S, Baggi E, Fattizzo M, Rigante D. Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections: an overview. *European journal of clinical microbiology & infectious diseases.* 2014;33(12):2105-9.
61. Nevsimalova S. The diagnosis and treatment of pediatric narcolepsy. *Current neurology and neuroscience reports.* 2014;14(8):469.
62. Cao MT, Guilleminault C. Narcolepsy: Diagnosis and management. *Principles and practice of sleep medicine:* Elsevier; 2017. p. 873-82. e5.
63. Davies M, Wilton L, Shakir S. Safety profile of modafinil across a range of prescribing indications, including off-label use, in a primary care setting in England. *Drug safety.* 2013;36(4):237-46.
64. Lecendreux M, Bruni O, Franco P, Gringras P, Konofal E, Nevsimalova S, et al. Clinical experience suggests that modafinil is an effective and safe treatment for paediatric narcolepsy. *Journal of sleep research.* 2012;21(4):481-3.
65. Lecendreux M, Poli F, Oudiette D, Benazzouz F, Donjacour CE, Franceschini C, et al. Tolerance and efficacy of sodium oxybate in childhood narcolepsy with cataplexy: a retrospective study. *Sleep.* 2012;35(5):709-11.
66. Dauvilliers Y, Bassetti C, Lammers GJ, Arnulf I, Mayer G, Rodenbeck A, et al. Pitolisant versus placebo or modafinil in patients with narcolepsy: a double-blind, randomised trial. *The Lancet Neurology.* 2013;12(11):1068-75.
67. Hecht M, Lin L, Kushida CA, Umetsu DT, Taheri S, Einen M, et al. Report of a case of immunosuppression with prednisone in an 8-year-old boy with an acute onset of hypocretin-deficiency narcolepsy. *Sleep.* 2003;26(7):809-10.
68. Chen W, Black J, Call P, Mignot E. Late-onset narcolepsy presenting as rapidly progressing muscle weakness: response to plasmapheresis. *Annals of neurology.* 2005;58(3):489-90.
69. Lecendreux M, Maret S, Bassetti C, Mouren MC, Tafti M. Clinical efficacy of high-dose intravenous immunoglobulins near the onset of narcolepsy in a 10-year-old boy. *Journal of sleep research.* 2003;12(4):347-8.