

# ÇOCUK NÖROLOJİ HASTALIKLARINDA ENDOKRİN ACİLLER

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## GİRİŞ

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Endokrinolojinin temel ana başlıklarından biri nöroendokrinolojидir. Aslında bu tanımlama hormonal sistem ve nörolojik kontrol arasındaki etkileşimi çok iyi açıklar. Genel olarak endokrinolojik hastalıkların gerek akut gerekse kronik dönemde neden olduğu nörolojik sorunlar iyi bilinmektedir. Bunun tersi durumlar da geçerlidir. Nörolojik hastalıklar açısından bakıldığından endokrin bozukluklar ya primer nörolojik soruna eşlik eden veya sonucu olarak ortaya çıkan sıkılıkla da kullanılan ilaçların yan etkileri olarak görülebilir. Tanı ve tedavisi önemlidir çünkü co-morbidite yanında mortaliteye kadar gidebilecek ağır klinik durumlar nadir değildir.

Bu bölümde nörolojik hastalıkların takibi sırasında sıkılıkla karşılaşılan endokrinolojik acil durumlardan söz edilecektir.

## ELEKTROLİT BOZUKLUKLARI

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### Sodyum Dengesi Bozuklukları;

Plazma osmolalitesinin temel bileşenlerinden biri sodyumdur. Vücutta su ve sodyum dengesi birkaç mekanizma ile kontrol

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klinik bulgusu nörolojik problem ile maskelenebilir. Nörolojik hastalardaki endokrinolojik problemlerin bulgusu non-spesifik olduğundan ancak akla getirilmesi halinde tanı konulabilir ve uygun tedavi düzenlenebilir.

## KAYNAKLAR

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1. Verbalis JG. Disorders of body water homeostasis. Best Pract Res Clin Endocrinol Metab 2003; 17:471.
2. Sterns RH, Emmett M, Forman JP. General principles of disorders of water balance (hyponatremia and hypernatremia) and sodium balance (hypovolemia and edema). Jan 2023. <https://www.uptodate.com>
3. Cui H, He G, Yang S, Lv Y, Jiang Z, Gang X, Wang G. Inappropriate Antidiuretic Hormone Secretion and Cerebral Salt-Wasting Syndromes in Neurological Patients. Front Neurosci. 2019 8;13:1170
4. Moritz ML. Syndrome of Inappropriate Antidiuresis. Pediatr Clin North Am. 2019;66:209-226.
5. Cuesta M, Thompson CJ. The syndrome of inappropriate antidiuresis (SIAD). Best Pract Res Clin Endocrinol Metab. 2016;30:175-87.
6. Gutierrez OM, Lin HY. Refractory hyponatremia. Kidney Int. 2007;71:79-82.
7. Bettinelli A, Longoni L, Tammaro F, Faré PB, Garzoni L, Bianchetti MG. Renal salt-wasting syndrome in children with intracranial disorders. Pediatr Nephrol. 2012;27:733-9.
8. Yee AH, Burns JD, Wijdicks EF. Cerebral salt wasting: pathophysiology, diagnosis, and treatment. Neurosurg Clin N Am. 2010;21:339-52.
9. Filippella M, Cappabianca P, Cavallo LM, Faggiano A, Lombardi G, de DE, Colao A. Very delayed hyponatremia after surgery and radiotherapy for a pituitary macroadenoma. J Endocrinol Invest. 2002;25:163-8.
10. Dalan R, Chin H, Hoe J, Chen A, Tan H, Boehm BO, Chua KS. Adipsic Diabetes Insipidus-The Challenging Combination of Polyuria and Adipsia: A Case Report and Review of Literature. Front Endocrinol (Lausanne). 2019;18;10:630.
11. Robertson GL. Abnormalities of thirst regulation. Kidney Int. 1984;25:460-9.
12. Crowley RK, Sherlock M, Agha A, Smith D, Thompson CJ. Clinical insights into adipsic diabetes insipidus: a large case series. Clin Endocrinol (Oxf). 2007;66:475-82.
13. Di Iorgi N, Morana G, Napoli F, Allegri AE, Rossi A, Maghnie M. Management of diabetes insipidus and adipsia in the child. Best Pract Res Clin Endocrinol Metab. 2015;29:415-36.
14. Hansen LK, Rittig S, Robertson GL. Genetic basis of familial neurohypopituitarism diabetes insipidus. Trends Endocrinol Metab 1997;8:363-372

15. Mavrakis AN, Tritos NA. Diabetes insipidus with deficient thirst: report of a patient and review of the literature. *Am J Kidney Dis.* 2008;51:851-9.
16. Maghnies M, Cosi G, Genovese E, Manca-Bitti ML, Cohen A, Zecca S, Tinelli C, Gallucci M, Bernasconi S, Boscherini B, Severi F, Aricò M. Central diabetes insipidus in children and young adults. *N Engl J Med.* 2000;343:998-1007.
17. Saifan C, Nasr R, Mehta S, Sharma Acharya P, Perrera I, Faddoul G, Nalluri N, Kesavan M, Azzi Y, El-Sayegh S. Diabetes insipidus: a challenging diagnosis with new drug therapies. *ISRN Nephrol.* 2013;24;2013:797620.
18. Patti G, Ibbà A, Morana G, Napoli F, Fava D, di Iorgi N, Maghnies M. Central diabetes insipidus in children: Diagnosis and management. *Best Pract Res Clin Endocrinol Metab.* 2020;34(5):101440.
19. Shoback D. Clinical practice. Hypoparathyroidism. *N Engl J Med.* 2008;24;359:391-403.
20. Agrawal L, Habib Z, Emanuele NV. Neurologic disorders of mineral metabolism and parathyroid disease. *Handb Clin Neurol.* 2014;120:737-48.
21. Carpenter T, Wolfsdorf JI, Hoppin AG. Etiology of hypocalcemia in infants and children. Jan 2023. <https://www.uptodate.com/contents/etiology-of-hypocalcemia-in-infants-and-children>
22. Ishii M. Endocrine Emergencies With Neurologic Manifestations. *Continuum (Minneapolis Minn).* 2017;23(3, Neurology of Systemic Disease):778-801.
23. Agrawal L, Habib Z, Emanuele NV. Neurologic disorders of mineral metabolism and parathyroid disease. *Handb Clin Neurol.* 2014;120:737-48.
24. Carter BL, Small RE, Mandel MD, Starkman MT. Phenytoin-induced hyperglycemia. *Am J Hosp Pharm.* 1981;38:1508-12.
25. Güler SK, Güneş N, Çokal BG, Yoldaş T, Söker EB. Development of Insulin Resistance in Patients with Epilepsy During Valproate and Carbamazepine Monotherapy. *Epilepsia* 2016;22:102-107
26. Sequist ER, Anderson J, Childs B, Cryer P, Dagogo-Jack S, Fish L, Heller SR, Rodriguez H, Rosenzweig J, Vigersky R; American Diabetes Association; Endocrine Society. Hypoglycemia and diabetes: a report of a workgroup of the American Diabetes Association and the Endocrine Society. *J Clin Endocrinol Metab.* 2013;98:1845-59.
27. Yamada T, Mitsuboshi S, Makino J, Suzuki K, Nishihara M, Neo M. Risk of Pregabalin-Induced Hypoglycemia: Analysis of the Japanese Adverse Drug Event Report Database. *J Clin Pharmacol.* 2022 Jun;62(6):756-761.
28. Kim SM, Geffner ME, Hoppin AG. Clinical manifestations and diagnosis of adrenal insufficiency in children. Jan 2023 <https://www.uptodate.com/contents/clinical-manifestations-and-diagnosis-of-adrenal-insufficiency-in-children>
29. Hayes WJ, Ferdinand A, Neabore S, Kappes JA, Hayes KM, Berendse J. Patient Case Report: Gabapentin-Induced Hypoglycemia. *J Pharm Pract.* 2022 Apr;35(2):298-301.
31. Kallabi F, Belghith N, Aloulou H, Kammoun et al. Clinical and Genetic Characterization of 26 Tunisian Patients with Allgrove Syndrome. *Arch*

- Med Res. 2016 ;47:105-10.
- 32. Berger J, Forss-Petter S, Eichler FS. Pathophysiology of X-linked adrenoleukodystrophy. Biochimie. 2014;98:135-42.
  - 33. Powers JM, Moser HW, Moser AB, Schaumburg HH. Fetal adrenoleukodystrophy: the significance of pathologic lesions in adrenal gland and testis. Hum Pathol. 1982;13:1013-9.
  - 34. Klouwer FC, Berendse K, Ferdinandusse S, Wanders RJ, Engelen M, Poll-The BT. Zellweger spectrum disorders: clinical overview and management approach. Orphanet J Rare Dis. 2015 ;1;10:151.
  - 35. Donoghue SE, Pitt JJ, Boneh A, White SM. Smith-Lemli-Opitz syndrome: clinical and biochemical correlates. J Pediatr Endocrinol Metab. 2018;28;3:451-459.
  - 36. Irimia Sieira P, Minguez Olaondo A., Martínez-Vila E., Ruttledge M. (2019) Neurological Manifestations of Endocrine Disorders. In: Portincasa P, Frühbeck G. (eds) Endocrinology and Systemic Diseases. Endocrinology. Springer, Cham.
  - 37. Charmandari E, Nicolaides NC, Chrousos GP. Adrenal insufficiency. Lancet. 2014;21;383:2152-67.