BÖLÜM 4

ROMATOLOJİK HASTALIKLARIN NÖROLOJİK BULGULARI

Hüseyin KILIÇ[1]
Ceren BİBİNOĞLU AMİROV[2]

SİSTEMİK LUPUS ERİTEMATOZUS

Sistemik lupus eritematozus (SLE) kronik otoimmün, multisistemik bir hastalıktır. Çocukluk çağı başlangıçlı SLE'nin insidansı yaklaşık 0,3-0,9/100.000, prevalansı 3,3-24/100.000 olarak tahmin edilmektedir.[1] Hastaların %15-22'si 16 yaş öncesi tanı alır.[2]

Nöropsikiyatrik Lupus (NP-SLE), SLE'deki hastalık aktivitesinin bir parçası olan inflamasyon, tromboz gibi süreçlere bağlı olarak herhangi bir nöroanatomik bölgenin etkilendiği tabloları tanımlar. Bu klinik tablolar primer NPSLE olarak da adlandırılır. Bunun dışında kullanılan ilaçlara veya komorbiditelere bağlı gelişen nöropatolojik tablolar da olabilir. Bu klinik durumlar ise bazı kaynaklarda sekonder NPSLE olarak adlandırılır. Juvenil SLE'de nöropsikiyatrik tutulum prevalansının %22-95 arasında olduğu düşünülmektedir.[3]

[1] Doç. Dr., İstanbul Üniversitesi-Cerrahpaşa, Cerrahpaşa Tıp Fakültesi Çocuk Nörolojisi, kilichuseyin@me.com
[2] Uzm. Dr., Ümraniye Eğitim ve Araştırma Hastanesi Çocuk Nörolojisi BD., cerenmarmara@gmail.com

Tablo 1: SLE'de görülen Nöropsikiyatrik Sendromlar (ACR-2001)*	
SANTRAL SİNİR SİSTEMİ	PERİFERİK SİNİR SİSTEMİ
Aseptik menenjit Serebrovasküler Hastalık Demyelinizan Sendrom Hareket bozukluğu (kore) Myelopati Nöbet Akut Konfüzyonel Durum Kognitif Disfonksiyon (Orta veya Ağır) Ağır depresyon Psikoz	Akut inflamatuar demyelinizan poliradikülopati Otonom disfonksiyon Mononöropati, tek/mültipleks Myastenia gravis Pleksopati Polinöropati (EMG-NCS ile kanıtlanmış)

* Ainiala H, Hietaharju A, Loukkola J, et al. Validity of the new American College of Rheumatology criteria for neuropsychiatric lupus syndromes: a population-based evaluation. Arthritis Rheum 2001; 45:419.

KAYNAKLAR

1. Kamphuis S, Silverman ED. Prevalence and burden of pediatric-onset systemic lupus erythematosus. *Nat Rev Rheumatol*. 2010;6(9). doi:10.1038/nrrheum.2010.121
2. Smith EMD, Lythgoe H, Midgley A, Beresford MW, Hedrich CM. Juvenile-onset systemic lupus erythematosus: Update on clinical presentation, pathophysiology and treatment options. *Clin Immunol*. 2019;209. doi:10.1016/j.clim.2019.108274
3. Shiari R. Neurologic manifestations of childhood rheumatic diseases. *Iran J Child Neurol*. 2012;6(4).
4. Giani T, Smith EMD, Al-Abadi E, et al. Neuropsychiatric involvement in juvenile-onset systemic lupus erythematosus: Data from the UK Juvenile-onset systemic lupus erythematosus cohort study. *Lupus*. 2021;30(12). doi:10.1177/09612033211045050
5. Massias JS, Smith EMD, Al-Abadi E, et al. Clinical and laboratory characteristics in juvenile-onset systemic lupus erythematosus across age groups. *Lupus*. 2020;29(5). doi:10.1177/0961203320909156
6. Liang MH, Corzillius M, Bae SC, et al. The American College of Rheumatology nomenclature and case definitions for neuropsychiatric lupus syndromes. *Arthritis Rheum*. 1999;42(4). doi:10.1002/1529-0131(199904)42:4<599::AID-ANR2>3.0.CO;2-F

7. Jeltsch-David H, Muller S. Neuropsychiatric systemic lupus erythematosus: Pathogenesis and biomarkers. *Nat Rev Neurol*. 2014;10(10). doi:10.1038/nrneurol.2014.148
8. Yoshio T, Hirata D, Onda K, Nara H, Minota S. Antiribosomal P protein antibodies in cerebrospinal fluid are associated with neuropsychiatric systemic lupus erythematosus. *J Rheumatol*. 2005;32(1).
9. Jennekens FGI, Kater L. The central nervous system in systemic lupus erythematosus. Part 1. Clinical syndromes: A literature investigation. *Rheumatology*. 2002;41(6). doi:10.1093/rheumatology/41.6.605
10. Ellis SG, Verity MA. Central nervous system involvement in systemic lupus erythematosus: A review of neuropathologic findings in 57 cases, 1955-1977. *Semin Arthritis Rheum*. 1979;8(3). doi:10.1016/S0049-0172(79)80009-8
11. Barnett Y, Sutton IJ, Ghadiri M, Masters L, Zivadinov R, Barnett MH. Conventional and advanced imaging in neuromyelitis optica. *Am J Neuroradiol*. 2014;35(8). doi:10.3174/ajnr.A3592
12. Rosina S, Chighizola CB, Ravelli A, Cimaz R. Pediatric Antiphospholipid Syndrome: from Pathogenesis to Clinical Management. *Curr Rheumatol Rep*. 2021;23(2). doi:10.1007/s11926-020-00976-7
13. Andreoli L, Chighizola CB, Banzato A, Pons-Estel GJ, De Jesus GR, Erkan D. Estimated frequency of antiphospholipid antibodies in patients with pregnancy morbidity, stroke, myocardial infarction, and deep vein thrombosis: A critical review of the literature. *Arthritis Care Res*. 2013;65(11). doi:10.1002/acr.22066
14. Avčin T, Cimaz R, Silverman ED, et al. Pediatric antiphospholipid syndrome: Clinical and immunologic features of 121 patients in an international registry. *Pediatrics*. 2008;122(5). doi:10.1542/peds.2008-1209
15. Muscal E, Brey RL. Antiphospholipid syndrome and the brain in pediatric and adult patients. *Lupus*. 2010;19(4). doi:10.1177/0961203309360808
16. Avčin T, Benseler SM, Tyrrell PN, Čučnik S, Silverman ED. A followup study of antiphospholipid antibodies and associated neuropsychiatric manifestations in 137 children with systemic lupus erythematosus. *Arthritis Care Res*. 2008;59(2). doi:10.1002/art.23334
17. Bertolaccini ML, Contento G, Lennen R, et al. Complement inhibition by hydroxychloroquine prevents placental and fetal brain abnormalities in antiphospholipid syndrome. *J Autoimmun*. 2016;75. doi:10.1016/j.jaut.2016.04.008
18. Mekinian A, Lachassinne E, Nicaise-Roland P, et al. European registry of babies born to mothers with antiphospholipid syndrome. *Ann Rheum Dis*. 2013;72(2). doi:10.1136/annrheumdis-2011-201167
19. Cervera R, Rodríguez-Pintó I, Legault K, Erkan D. 16th International Congress on Antiphospholipid Antibodies Task Force Report on Catastrophic Antiphospholipid Syndrome. *Lupus*. 2020;29(12). doi:10.1177/0961203320951260

20. Benseler SM, Silverman E, Aviv RI, et al. Primary central nervous system vasculitis in children. *Arthritis Rheum*. 2006;54(4). doi:10.1002/art.21766
21. Elbers J, Halliday W, Hawkins C, Hutchinson C, Benseler SM. Brain biopsy in children with primary small-vessel central nervous system vasculitis. *Ann Neurol*. 2010;68(5). doi:10.1002/ana.22075
22. Wan C, Su H. A closer look at Angiitis of the central nervous system. *Neurosciences*. 2017;22(4). doi:10.17712/nsj.2017.4.20170052
23. Bérubé MD, Blais N, Lanthier S. Neurologic manifestations of Henoch–Schönlein purpura. *Handb Clin Neurol*. 2014;120:1101-1111. doi:10.1016/B978-0-7020-4087-0.00074-7
24. Iannetti L, Zito R, Bruschi S, et al. Recent understanding on diagnosis and management of central nervous system vasculitis in children. *Clin Dev Immunol*. 2012;2012. doi:10.1155/2012/698327
25. Beelen J, Benseler SM, Dropol A, Ghali B, Twilt M. Strategies for treatment of childhood primary angiitis of the central nervous system. *Neurol Neuroimmunol NeuroInflammation*. 2019;6(4). doi:10.1212/NXI.0000000000000567
26. Hetland LE, Susrud KS, Lindahl KH, Bygum A. Henoch-schönlein purpura: A literature review. *Acta Derm Venereol*. 2017;97(10). doi:10.2340/00015555-2733
27. Weiss PF. Pediatric vasculitis. *Pediatr Clin North Am*. 2012;59(2):407-423. doi:10.1016/j.pcl.2012.03.013
28. Saulsbury FT. Henoch-Schonlein purpura in children: Report of 100 patients and review of the literature. *Medicine (Baltimore)*. 1999;78(6). doi:10.1097/00005792-199911000-00005
29. Belman AL, Leicher CR, Moshe SL, Mezey AP. Neurologic manifestations of Schoenlein-Henoch purpura: Report of three cases and review of the literature. *Pediatrics*. 1985;75(4). doi:10.1542/peds.75.4.687
30. Abend NS, Licht DJ, Spencer CH. Lupus Anticoagulant and Thrombosis Following Henoch-Schönlein Purpura. *Pediatr Neurol*. 2007;36(5). doi:10.1016/j.pediatrneurol.2007.01.005
31. Terasawa K, Ichinose E, Matsuishi T, Kato H. Neurological complications in Kawasaki disease. *Brain Dev*. Published online 1983. doi:10.1016/S0387-7604(83)80041-2
32. Natália NR, de Magalhães CMR, de Fátima R. Almeida R, dos Santos RCR, Gandolfi L, Pratesi R. Prospective study of kawasaki disease complications: Review of 115 cases. *Rev Assoc Med Bras*. Published online 2011.
33. Yu JG, Wei Y, Zhao SY, Zou CC, Shu Q. Aseptic meningoencephalitis in children with kawasaki disease. *Hong Kong J Paediatr*. Published online 2010.
34. International Study Group for Behçet's Disease. Criteria for diagnosis of Behcet's disease. *Lancet*. 1990;335(8697). doi:10.1016/0140-6736(90)92643-V
35. Pain CE. Juvenile-onset Behçet's syndrome and mimics. *Clin Immunol*. 2020;214. doi:10.1016/j.clim.2020.108381

36. Yildiz M, Haslak F, Adrovic A, et al. Pediatric Behçet's Disease. *Front Med*. 2021;8. doi:10.3389/fmed.2021.627192
37. Chae EJ, Do KH, Seo JB, et al. Radiologic and clinical findings of Behçet disease: Comprehensive review of multisystemic involvement. *Radiographics*. 2008;28(5). doi:10.1148/rg.e31
38. Uluduz D, Kürtüncü M, Yapici Z, et al. Clinical characteristics of pediatric-onset neuro-Behçet disease. *Neurology*. 2011;77(21). doi:10.1212/WNL.0b013e318238edeb
39. Costagliola G, Cappelli S, Consolini R. Behçet's disease in children: Diagnostic and management challenges. *Ther Clin Risk Manag*. 2020;16. doi:10.2147/TCRM.S232660
40. Kalra S, Silman A, Akman-Demir G, et al. Diagnosis and management of neuro-Behçet's disease: International consensus recommendations. *J Neurol Sci*. 2013;333. doi:10.1016/j.jns.2013.07.2482