Bölüm 7

NÖROBİLİŞSEL BOZUKLUKLAR

Medine GIYNAŞ AYHAN[1]

DSM-4'te "Deliryum, Demans, Amnestik ve Diğer Bilişsel Bozukluklar" başlığı ile sınıflandırılan bozukluklar DSM-5'te "Nörobilişsel Bozukluklar" olarak değiştirilmiştir. Nörobilişsel bozukluklar "Deliryum" ve "Ağır ve Hafif Nörobilişsel Bozukluklar" şeklinde iki ana başlık altında toplanmıştır. Bu bölümde deliryum ve ağır ve hafif nörobilişsel bozuklukların (Alzheimer hastalığı, vasküler, frontotemporal ve Lewy cisimcikli nörobilişsel bozukluklar, Parkinson ve Huntington hastalığına bağlı nörobilişsel bozukluk) yanısıra nörobilişsel bozukluklarda görülen nöropsikiyatrik belirtilerden de bahsedilecektir.

DELİRYUM

Deliryum, bilişsel alanda genellikle saatler veya birkaç gün içinde ortaya çıkan bozuklukla birlikte, dikkat, uyku-uyanıklık ve psikomotor davranış alanında bozuklukla seyreden organik beyin bozukluğudur. Bu tablo ağır ya da hafif nörobilişsel bozuklukla daha iyi açıklanamaz (Tablo 1). Deliryum genel hastanelerde yatan hastalarda, özellikle yaşlılarda, en sık karşılaşılan nöropsikiyatrik bozukluklardandır. Morbiditeyi, mortaliteyi, tedavi masraflarını, hastanede yatış süresini ve kognitif fonksiyonlardaki bozukluğu artırdığından acil müdahale edilmesi gereken bir durumdur. Yaşlı hastalarda mortalite oranı %15-30 arasında değişmektedir.

[1] Uzm. Dr., Konya Eğitim ve Araştırma Hastanesi, e-mail:drmedineayhan@gmail.com

ve birçok ilaç etkileşimi olduğu bildirilmiştir. Levetirasetam ve lamotrijin gibi ajanların ise bazı faydaları olabilir, ancak klinik araştırma kanıtları yoktur. Benzodiazepinlerin nörobilişsel bozukluğu olan hastalarda NPB'in tedavisinde çok az etkili olduğuna dair kanıtlara rağmen yaygın olarak kullanılmaktadır. Bu hastalarda benzodiazepinler bilişsel işlevlerdeki bozulmaya ve sedasyondan dolayı düşme ve kırıklara neden olduğu gösterilmiştir. Tek doz lorazepamın akut ajitasyon için etkili olabileceğine dair kanıtlar vardır, ancak kronik kullanımı için yeterli kanıt yoktur.

Uyku Bozuklukları

Uyku bozukluğu nörobilişsel bozukluklarda yaygın olarak görülmektedir. Özellikle ileri evredeki hastaların %50'sinden fazlası uyku bozukluğu yaşamaktadır. Farmakolojik tedavi başlamadan önce uyku hijyeninin anlatılması ve uygulanması sıklıkla işe yarar. Kafein içeren gıdaların alınmaması, gece sıvı tüketiminin azaltılması, gündüz fiziksel aktivitenin artırılması, uyku için uygun fiziksel koşulların (ısı, ışık gibi) oluşturulması sağlanmalıdır. Bu uygulamalar işe yaramazsa en az yan etkili ilaçlarla farmakolojik tedavi başlanabilir. Kolinesteraz inhbitörlerinin gece alınması uyku latansında düzelme oluşturabilir. Trazodonun (50 mg/gün) demans hastalarında uyku ölçümlerini düzelttiği gösterilmiştir. Düşme ve bilişsel fonksiyonlarda bozulma riskini artırdıkları için benzodiazepinler ve benzodiazepin reseptör agonistlerinden (zolpidem ve zopiklon) kaçınılmalıdır.

KAYNAKLAR

1. Aarsland D, Andersen K, Larsen JP, ve ark. Prevalence and characteristics of dementia in Parkinson disease; an 8-year prospective study. Arch Neurol. 2003;60:387-392.
2. Allegri RF, Sarasola D, Serrano CM, ve ark. Neuropsychiatric symptoms as a predictor of caregiver burden in Alzheimer's disease. Neuropsychiatric Disease and Treatment. 2006;2 (1):105-110.
3. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 5th Edition, American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th ed.). Arlington, VA: American Psychiatric Publishing.
4. Amerikan Psikiyatri Birliği, Ruhsal Bozuklukların Tanısal ve Sayımsal El Kitabı, Beşinci Baskı (DSM-5), Tanı Ölçütleri Başvuru El Kitabı'ndan, Köroğlu E (Çev.), (2013). Ankara:Hekimler Yayın Birliği.

5. Aronson MK, Post DC, Guastadisegni P. Dementia, agitation, and care in the nursing home. J Am Geriatr Soc. 1993;41(5):507-512.
6. Ballard C, Gauthier S, Corbett A, ve ark. Alzheimer's disease. Lancet. 2011;377:1019-1031.
7. Banks SJ, Weintraub S. Neuropsychiatric symptoms in behavioral variant frontotemporal dementia and primary progressive aphasia. J Geriatr Psychiatry Neurol. 2008;21(2):133-141.
8. Barker WW, Luis CA, Kashuba A, ve ark. Relative frequencies of Alzheimer disease, Lewy body, vascular and frontotemporal dementia, and hippocampal sclerosis in the State of Florida Brain Bank. Alzheimer Dis Assoc Disord. 2002;16(4):203-212.
9. Benelli RM, Hofmann P. A rewiew of the treatment options for Huntington's disease. Expert Opin Pharmacother. 2004;5(4):767-776.
10. Bradshaw J, Saling M, Hapwood M, ve ark. Fluctuation cognition in dementia with Lewy bodies and Alzheimer's disease is qualitatively distinguishable. Journal of Neurology, Neurosurgery, and Psychiatry. 2004;75: 382-387.
11. Brown TM, Boyle MF. Delirium. BMJ 2002;325:644-647.
12. Brunnstrom H, Gustafson L, Passant U, Englund E. Prevalence of dementia subtypes: a 30-year retrospective survey of neuro-pathological reports. Arch Gerontol Geriatriatr 2009;49:146-149.
13. Burhan AM, Hirsch CH, Marlatt NE. (2018). Neuropsychiatric Symptoms of Major or Mild Neurocognitive Disorders. Hategan A, Bourgeois JA, Hirsch CH, Giroux C.(Ed.), Geriatric Psychiatry: A Case-Based Textbook (p.467-494). Switzerland: Springer International Publishing AG part of Springer Nature.
14. Burhan AM, Moradizadeh M, Marlatt NE. (2018). Major or mild vascular neurocognitive disorder. Hategan A, Bourgeois JA, Hirsch CH, Giroux C. (Eds.), Geriatric Psychiatry: A Case-Based Textbook (p.445-466). Switzerland: Springer International Publishing AG part of Springer Nature.
15. Camargos EF, Louzada LL, Quintas JL, ve ark.Trazodone improves sleep parameters in Alzheimer disease patients: a randomized, double-blind, and placebo-controlled study. Am J Geriatr Psychiatry. 2014;22(12):1565-1574.
16. Cankurtaran EŞ, Çayköylü A. Alzheimer Demansı: Tanı, Ayırıcı Tanı ve Tedavisi. Turkiye Klinikleri Psychiatry-Special Topics. 2016;9(4):42-47.
17. Carrillo MC, Ryan JM,ve ark. Neuropsychiatric symptoms in Alzheimer's disease. Alzheimers Dement. 2011;7(5):532-539.
18. Chan DC, Kasper JD, Black BS, Rabins PV. Presence of behavioral and psychological symptoms predicts nursing home placement in community-dwell-

ing elders with cognitive impairment in univariate but not multivariate analysis. J Gerontol A Biol Sci Med Sci. 2003;58(6):548-554.
19. Cohen-Mansfield J. Conceptualization of agitation: results based on the Cohen-Mansfield agitation inventory and the agitation behavior mapping instrument. International Psychogeriatrics. 1996;Suppl 3:309-315.
20. Corada MM, Brookmayer R, Paganini-Hill A, ve ark. Dementia incidence continues to increase with age in the oldest old: the 90+ study. Ann Neurol. 2010;67:114-121.
21. Cross R. Genetic risks for Alzheimer's explained. Neuroscience. 2017;95(4):8.
22. Cummings J, Isaacson S, Mills R, ve ark. Pimavanserin for patients with Parkinson's disease psychosis: a randomized, placebo-controlled phase 3 trial. Lancet. 2014;383(9916):533-540.
23. Cummings J, Lai TJ, Hemrungrojn S, ve ark. Role of donepezil in the management of neuropsychiatric symptoms in Alzheimer's disease and dementia with Lewy bodies. CNS Neurosci Ther. 2016;22(3):159-166.
24. Çelik T, Uzbay T. New developments in the pharmacological treatment of Alzheimer›sdisease. Demans Derg. 2003;3(2):48-58.
25. Çıkrıkçılı U, Çakır U. Frontotemporal Demans. Turkiye Klinikleri J Psychiatry-Special Topics, 2016;9(4):58-64.
26. Çınar N. Alzheimer hastalığında epidemiyoloji ve klinik bulgular. Türkiye Klinikleri J Neurol-Special Topics. 2012;5:1-6.
27. Defrancesco M, Marksteiner J, Fleischhacker WW, ve ark. Use of benzodiazepines in Alzheimer's disease: a systematic review of literature. Int J Neuropsychopharmacol. 2015;18(10):055.
28. De Lange E, Verhaak PFM, van der Meer K. Prevalence, presentation and prognosis of delirium in older people in the population, at home and in long term care: a review. Int J Geriatr Psychiatry. 2013;28:127-134.
29. Dubois B, Feldman HH, Jacova C, ve ark. Revising the definition of Alzheimer's disease: a new lexicon. Lancet Neurol. 2010;9:1118-1127.
30. Erden Aki Ö. Demansa Bağlı Davranışsal ve Psikolojik Belirtiler ve Tedavisi. Turkiye Klinikleri J Psychiatry-Special Topics 2016;9(4):48-57.
31. Erden Aki Ö. Yaşlı bireylerde demans ve depresyon ayırıcı tanısı. Turkish J Geriatrics. 2010;13 Özel sayı(3):37-42.
32. Ersoy N, Başak AN. Huntington hastalığının moleküler biyolojisi. Türk Nöroloji Derg. 2005;11(1):27-44.
33. Etherton-Beer CD. Vascular cognitive impairment in dementia. Maturitas. 2014;79:220-226.

34. Fauth EB, Gibbons A. Which behavioral and psychological symptoms of dementia are the most problematic? Variability by prevalence, intensity, distress ratings, and associations with caregiver depressive symptoms. Int J Geriatr Psychiatry. 2014;29(3):263-271.
35. Fenelon G, Alves G. Epidemiology of psychosis in Parkinson's disease. J Neurol Sci. 2010;289(1-2):12-17.
36. Feri CP, Prince M, Brayna C, ve ark. Global prevalance of dementia: a Delphi consensus study. Lancet 2005;366:2112-2117.
37. Fernando MS, Ince PG, Function MRCC. Ageing Neuropathology Study G. Vascular pathologies and cognition in a population-based cohort of elderly people. J Neurol Sci. 2004;226(1-2):13-17.
38. Finger EC. Frontotemporal Dementias. Continuum (Minneap Minn) 2016;22:464-489.
39. Flaherty JH, Yue J, Rudolph JL. Dissecting delirium: phenotypes, consequences, screening, diagnosis, prevention, treatment, and program implementation. Clin Geriatr Med. 2017;33(3):393-413.
40. Friedman JH. Parkinson disease psychosis: update. Behav Neurol. 2013;27(4):469-477.
41. Fuh JL, Wang SJ, Cummings JL. Neuropsychiatric profiles in patients with Alzheimer's disease and vascular dementia. J Neurol Neurosurg Psychiatry. 2005;76(10):1337-1341.
42. Gallagher D, Herrmann N. Antiepileptic drugs for the treatment of agitation and aggression in dementia: do they have a place in therapy? Drugs. 2014;74(15):1747-1755.
43. Glabe CG. Common mechanisms of amyloid oligomer pathogenesis in degenerative disease. Neurobiol Aging 2006;27(4):570-575.
44. Gomperts SN. Lewy Body Dementias: Dementia With Lewy Bodies and Parkinson Disease Dementia. Continuum (Minneap Minn) 2016;22:435-463.
45. Graham A, Hodges GR. Frontotemporal dementia. Psychiatry. 2005;4:55-58.
46. Graham WV, Bonito-Oliva A, Sakmar TP. Update on Alzheimer's Disease Theraphy and Prevention Strategies. Annu Rev Med 2017;68(7):413-430.
47. Hategan A, Hirsch CH, Francis D, Bourgeois JA. (2018). Delirium in older adults. Hategan A, Bourgeois JA, Hirsch CH, Giroux C. (Eds.), Geriatric Psychiatry: A Case-Based Textbook (p.343-368). Switzerland: Springer International Publishing AG part of Springer Nature.
48. Hategan A, Xiang GL. (2018). Major or mild neurocognitive disorder due to Alzheimer disease. Hategan A, Bourgeois JA, Hirsch CH, Giroux C. (Eds.), Geriatric Psychiatry: A Case-Based Textbook (p.369-402). Switzerland: Springer International Publishing AG part of Springer Nature.

49. Helzner EP, Scarmeas N, Cosentino S, ve ark. Survival in Alzheimer disease: a multiethnic, population-based study of incident cases. Neurology 2008;71:1489-1495.
50. How PC, Lo P, Xiang GL. (2018). Major or mild neurocognitive disorders with Lewy bodies. Hategan A, Bourgeois JA, Hirsch CH, Giroux C.(Eds.), Geriatric Psychiatry: A Case-Based Textbook (p.429-444). Switzerland: Springer International Publishing AG part of Springer Nature.
51. Hshieh TT, Yue J, Oh E, ve ark. Effectiveness of multicomponent nonpharmacological delirium interventions: a metaanalysis. JAMA Intern Med. 2015;175:512-520.
52. Huang LW, Inouye, SK, Jones RN, ve ark. Identifying indicators of important diagnostic features of delirium. J Am Geriatr Soc. 2012;60(6):1044-1050.
53. Husband A, Worsley A. Different types of dementia. Pharmaceutical Journal. 2006;277:579-582.
54. Hyman BT, Phelps CH, Beach TG, ve ark. National Institute on Aging-Alzheimer's Association guidelines for the neuropathologic assessment of Alzheimer's disease. Alzheimers Dement. 2012;8:1-13.
55. Inouye SK. Delirium in older persons. N Engl J Med. 2006;354:1157-1165.
56. Inouye SK, Westendorp RG, Saczynski JS. Delirium in elderly people. Lancet 2014;383:911-922.
57. Jack CR Jr, Knopman DS, Jagust WJ, ve ark. Hypothetical model of dynamic biomarkers of the Alzheimer's pathological cascade. Lancet Neurol 2010;9:119-128.
58. Jawaid A, Rademakers R, Kass JS, ve ark. Traumatic brain injury may increase the risk for frontotemporal dementia through reduced progranulin. Neurodegener Dis. 2009;6:219-220.
59. Jin YP, Di Legge S, Ostbye T, ve ark. The reciprocal risks of stroke and cognitive impairment in an elderly population. Alzheimers Dement. 2006;2(3):171-178.
60. Kagansky N, Rimon E, Naor S, ve ark. Low incidence of delirium in very old people after surgery for hip fractures. Am J Geriatr Psychiatry 2004;12(3):306-314.
61. Kales HC, Gitlin LN, Lyketsos CG. Management of neuropsychiatric symptoms of dementia in clinical settings: recommendations from a multidisciplinary expert panel. J Am Geriatr Soc. 2014;62(4):762-769.
62. Karttunen K, Karppi P, Hiltunen A, ve ark. Neuropsychiatric symptoms and quality of life in patients with very mild and mild Alzheimer's disease. Int J Geriatr Psychiatry. 2011;26(5):473-482.
63. Kassubek J, Bernhard Landwerhmeyer G, Ecker D, ve ark. Global cerebral atrophy in early stages of Huntington's disease: quantitative MRI study. Neuroreport. 2004;15(2):363-365.

64. Kazui H, Yoshiyama K, Kanemoto H,ve ark.Differences of behavioral and psychological symptoms of dementia in disease severity in four major dementias. PLoS One. 2016;11(8):e0161092.
65. Kennedy M, Enander RA, Tadiri SP, ve ark. Delirium risk prediction, healthcare use and mortality of elderly adults in the emergency department. J Am Geriatr Soc. 2014;62:462-469.
66. Kim WS, Kågedal K, Halliday GM. Alpha-synuclein biology in Lewy body diseases. Alzheimers Res Ther. 2014;6(5):73.
67. Knopman DS, Parisi JE, Boeve BF, ve ark. Vascular dementia in a population-based autopsy study. Arch Neurol. 2003;60(4):569-575.
68. Kudiaki Ç. Alzheimer hastalığı, vasküler demans ve Lewy cisimcikli demansta öne çıkan bilişsel bozulmalar. Turkish J Geriatrics. 2010;13(3):47-51.
69. Lambon-Ralph MA, Powell J, Howeard D, ve ark. Semantic memory is impaired in both dementia with Lewy bodies and dementia of Alzheimer's type: A comparative neuropsychological study and literature review. Journal of Neurology, Neurosurgery, and Psychiatry. 2001;70,149-156.
70. Lanctot KL, Amatniek J, Ancoli-Israel S, ve ark. Neuropsychiatric signs and symptoms of Alzheimer's disease: new treatment paradigms. Alzheimers Dement (NY). 2017;3(3):440-449.
71. Lekeu F, Magis D, Marique P, ve ark. The California Verbal Learning Test and other standard clinical neuropsychological tests to predict conversion from mild memory impairment to dementia. Journal of Clinical and Experimental Neuropsychology. 2010;32(2):164-173.
72. Leslie DL, Inouye SK. The importance of delirium: economic and societal costs. J Am Geriatr Soc. 2011;59:241-243.
73. Maust DT, Kim HM, Seyfried LS,ve ark.Antipsychotics, other psychotropics, and the risk of death in patients with dementia: number needed to harm. JAMA Psychiatry. 2015;72(5):438-445.
74. Maust DT, Langa KM, Blow FC, ve ark. Psychotropic use and associated neuropsychiatric symptoms among patients with dementia in the USA. Int J Geriatr Psychiatry. 2017;32(2):164-174.
75. Marcantonio ER. Delirium in hospitalized older adults. New England Journal of Medicine. 2017;377(15):1456-1466.
76. Marshall MC, Soucy MD. Delirium in the intensive care unit. Crit Care Nurs Q. 2003;26:172-178.
77. Martin NJ, Stones MJ, Young JE, Bedard M. Development of delirium: a prospective cohort study in a community hospital. Int Psychogeriatr 2000;12 (1):117-127.

78. Mathias JL, Burke J. Cognitive functioning in Alzheimer's and vascular dementia: A meta-analysis. Neuropsychology. 2009;23(4):411-423.
79. Mauri M, Sinforiani E, Zucchella C, et al. Progression to dementia in a population with amnestic mild cognitive impairment: clinical variables associated with conversion. Funct Neurol. 2012;27(1):49-54.
80. McCusker J, Cole MG, Dendukuri N, Belzile E. Does delirium increase hospital stay? J Am Geriatr Soc. 2003; 51(11):1539-1546.
81. McKhann GM, Knopman DS, Chertkow H, ve ark. The diagnosis of dementia due to Alzheimer's disease: recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease. Alzheimers Dement. 2011;7:263-269.
82. McNicoll L, Pisani MA, Zhang Y, ve ark. Delirium in the intensive care unit: occurrence and clinical course in older patients. Journal of the American Geriatrics Society. 2003;51(5):591-598.
83. Metzler-Baddeley C. A review of cognitive impairments in dementia with Lewy bodies relative to Alzheimer's disease and Parkinson's disease with dementia. Cortex. 2007;43(5):583-600.
84. Molin P, Rockwood K. The new criteria for Alzheimer's disease-implications for geriatricians. Can Geriatr J. 2016;19(2):66-73.
85. Montine TJ, Phelps CH, Beach TG, ve ark. National Institute on Aging-Alzheimer's Association guidelines for the neuropathologic assessment of Alzheimer's disease: a practical approach. Acta Neuropathol 2012;123:1-11.
86. Mucke L. Neuroscience: Alzheimer's disease. Nature 2009;461(7266):895-897.
87. Neufeld KJ, Yue J, Robinson TN, Inouye SK, Needham DM. Antipsychotic medication for prevention and treatment of delirium in hospitalized adults: a systematic review and meta-analysis. J Am Geriatr Soc. 2016;64:705-714.
88. Neugroschl J, Sano M. Current treatment and recent clinical research in Alzheimer'sdisease. Mt Sinai J Med. 2010;77(1):3-16.
89. Nicolas G, Beherec L, Hannequin D, ve ark. Dementia in middle-aged patients with schizophrenia. J Alzheimers Dis. 2014;39:809-822.
90. Noe E, Marder K, Bell KL, ve ark. Comparison of dementia with Lewy bodies to Alzheimer's disease and Parkinson's disease with dementia. Moving Disorders. 2004;19:60-67.
91. Okura T, Plassman BL, Steffens DC, ve ark. Neuropsychiatric symptoms and the risk of institutionalization and death: the aging, demographics, and memory study. J Am Geriatr Soc. 2011;59(3):473-481.
92. Onur E, Cimilli C. (2007). Deliryum. Köroğlu E, Güleç C. (Ed.) Psikiyatri Temel Kitabı. (s.114-122). Ankara: Hekimler Yayın Birliği.

93. Öztürk O, Uluşahin A. (2015). Ruh sağlığı ve bozuklukları. (13. Baskı). Ankara: Nobel Tıp Kitapevleri
94. Phan SV, Osae S, Morgan JC, ve ark. Neuropsychiatric Symptoms in Dementia: considerations for Pharmacotherapy in the USA. Drugs in R&D. 2019;19:93-115.
95. Plassman BL, Langa KM, Fisher GG, ve ark. Prevalence of dementia in the United States: the aging, demographics, and memory study. Neuroepidemiology 2007;29:125-132.
96. Popeo, D. M. Delirium in older adults. Mount Sinai Journal of Medicine: A Journal of Translational and Personalized Medicine. 2011;78(4);571-582.
97. Porsteinsson AP, Drye LT, Pollock BG, ve ark. Effect of citalopram on agitation in Alzheimer disease: the CitAD randomized clinical trial. JAMA. 2014;311(7):682-691.
98. Qui C, Kivipelto M, von Strauss E. Epidemiology of Alzheimer's disease: occurence, determinants, and strategies toward intervention. Dialogues Clin Neurosci 2009;11:111-128.
99. Rahkonen T, Eloniemi-Sulkava U, Halonen P, ve ark. Delirium in non-demented oldest old in the general population: risk factors and prognosis. Int J Geriatr Psychiatry. 2001;16(4):415-421.
100. Rahkonen T, Luukainen-Markkula R, Paanila S, ve ark. Delirium episode as a sign of undetected dementia among community dwelling elderly subjects: a 2 year follow up study. J Neurol Neurosurg Psychiatry. 2000; 69(4):519-521.
101. Rahkonen T, Makela H, Paanila S, ve ark. Delirium in elderly people without severe predisposing disorders: etiology and 1-year prognosis after discharge. Int Psychogeriatr. 2000;12(4):473-481.
102. Ratnavalli E, Brayne C, Dawson K, Hodges JR. The prevalence of frontotemporal dementia. Neurology. 2002;58:1615-1621.
103. Ricci M, Guidoni SV, Sepe-Monti M, ve ark. Clinical findings, functional abilities and caregiver distress in the early stage of dementia with Lewy bodies (DLB) and Alzheimer's disease (AD) Archives of Gerontology and Geriatrics. 2009;49:101-114.
104. Rossor MN, Fox NC, Mummery CJ, ve ark. The diagnosis of young-onset dementia. Lancet Neurol. 2010;9:793-806.
105. Rudolph JL, Jones RN, Levkoff SE, ve ark. Derivation and validation of a preoperative prediction rule for delirium after cardiac surgery. Circulation. 2009;119:229-236.
106. Santos FS, Velasco IT, Fraguas R Jr. Risk factors for delirium in the elderly after coronary artery bypass graft surgery. Int Psychogeriatr. 2004;16(2):175-193.

107. Sasajima Y, Sasajima T, Uchida H, ve ark. Postoperative delirium in patients with chronic lower limb ischemia what are the specific markers? Eur J Vasc Endovasc Surg. 2000;20(2):132-137.
108. Satizabal CL, Beiser AS, Chouraki V, ve ark. Incidence of dementia over three decades in the Framingham Heart Study. N Engl J Med. 2016;374:523-532.
109. Schenning KJ, Deiner SG. Postoperative delirium in the geriatric patient. Anesthesiol Clin. 2015;33(3):505-516.
110. Selekler K. Alois Alzheimer ve Alzheimer Hastalığı. Turkish Journal of Geriatrics 2010;13:9-14.
111. Siddiqi N, House AO, Holmes JD. Occurrence and outcome of delirium in medical in-patients: a systematic literature review. Age Ageing. 2006;35:350-364.
112. Silverman JM, Smith CJ, Marin DB, ve ark. Familial patterns of risk in very late-onset Alzheimer disease. Arch Gen Psychiatry. 2003;60:190-197.
113. Smith DG, Cappai R, Barnham KJ. The redox chemistry of the Alzheimer's disease amyloid β peptide. Biochim Biophys Acta. 2007;1768 (8):1976-1990.
114. Smith E. Vascular Cognitive Impairment. Continuum (Minneap Minn). 2016;22:490-509.
115. Soylu Ö, Karalı N. Alzheimer Hastalığı ve Tedavisinde Güncel Yaklaşımlar. Journal of Literature Pharmacy Sciences. 2017;6(2):94-109.
116. Spaan PEJ, Raajmakers JGW, Jonker C. Early assessment of dementia: the contributtion of different memory components. Neuropsychology. 2005;19(5):629-640.
117. Stavitsky K, Brickman AM, Scarmeas N, ve ark. The progression of cognition, psychiatric symptoms, and functional abilities in dementia with Lewy Bodies and Alzheimer Disease. Arch Neurol 2006;63:1450-1456.
118. Sun X, Jin L, Ling P. Review of drugs for Alzheimer's disease. Drug Discov Ther. 2012;6(6):285-290.
119. Tampi RR, Tampi DJ. Efficacy and tolerability of benzodiazepines for the treatment of behavioral and psychological symptoms of dementia: a systematic review of randomized controlled trials. Am J Alzheimers Dis Other Dement. 2014;29(7):565-574.
120. Van der Mussele S, Le Bastard N, Saerens J, ve ark. Agitation-associated behavioral symptoms in mild cognitive impairment and Alzheimer's dementia. Aging and Mental Health 2015;19(3):247-257.
121. van Duijn E, Kingma EM, Timman R, ve ark. Crosssectional study on prevalences of psychiatric disorders in mutation carriers of Huntington's disease compared with mutation-negative first-degree relatives. Journal of Clinical Psychiatry. 2008;69:1804-1810.

122. Vérez Cotelo N, Andrés Rodríguez NF, Fornos Pérez JA, ve ark. Burden and associated pathologies in family caregivers of Alzheimer's disease in patients in Spain. Pharm Pract (Granada) 2015;13(2):521-517.
123. Villemagne VL, Burnham S, Bourgeat P, ve ark. Amyloid β deposition, neurodegeneration, and cognitive decline in sporadic Alzheimer's disease: a prospective cohort study. Lancet Neurol. 2013;12:357-367.
124. Wancata J, Windhaber J, Krautgartner M, Alexandrowicz R. The consequences of non-cognitive symptoms of dementia in medical hospital departments. International Journal of Psychiatry in Medicine 2003;33(3):257-271.
125. Waite LM. Treatment for Alzheimer's disease: has anything changed? Aust Prescr. 2015;38(2):60-63.
126. Waldö ML. The frontotemporal dementias. Psychiatr Clin North Am. 2015;38(2):193-209.
127. Weintraub D, Mintzer JE, Weintraub D,ve ark. Sertraline for the treatment of depression in Alzheimer disease: week-24 outcomes. Am J Geriatr Psychiatry. 2010;18(4):332-340.
128. White L, Petrovitch H, Hardman J, ve ark. Cerebrovascular pathology and dementia in autopsied Honolulu-Asia Aging Study participants. Ann N Y Acad Sci. 2002;977:9-23.
129. Yazgan Ç. (2007). Demans. Köroğlu E, Güleç C. (Ed.) Psikiyatri Temel Kitabı. (s.113-145). Ankara: Hekimler Yayın Birliği.
130. Zhao QF, Tan L, Wang HF, ve ark. The prevalence of neuropsychiatric symptoms in Alzheimer's disease: systematic review and meta-analysis. J Affect Disord. 2016;190:264-271.