Dravet Syndrome

Dravet syndrome, previously known as severe myoclonic epilepsy of infancy (SMEI), is a type of epilepsy with seizures that are often triggered by hot temperatures or fever.

Dravet and Bureau in 1981 described “benign myoclonic epilepsy in infancy” in 7 normal children with onset of myoclonic seizures in the first 3 years of life [1]. The syndrome was defined as including myoclonic seizures only, except rare simple febrile seizures, with good prognosis regarding response to therapy and cognitive functions.

Dravet Syndrome (DS) is a severe epileptic encephalopathy of childhood involving intractable seizures, recurrent status epilepticus and cognitive decline. Because DS is a rare disease, available data is limited and evidence-based treatment guidelines are lacking.

Both VNS and corpus callosotomy (CC) can be effective at reducing seizure frequency. Patients with DS may benefit from earlier and more aggressive surgical intervention. Studies using larger patient cohorts will help clarify the role that surgery may play in the multidisciplinary approach to controlling seizures in DS. Further studies will help determine the appropriate timing of and type of surgical intervention [2].

Pathogenesis

Loss of function in the Scn1a gene leads to Dravet syndrome (DS). Reduced excitability in cortical inhibitory neurons is thought to be the major cause of DS seizures.

Gong et al., investigated whether SCN1B and SCN2B variants are commonly happened in DS patients without SCN1A variants. A total of 22 DS patients without SCN1A variants and 100 healthy controls were enrolled in this genetic study. DNA from DS patients was sequenced by Sanger method in whole exons of SCN1B and SCN2B genes. We identified two exon variants (c.351C>T, p.G117G and c.467C>T, p.T156M), which were present both in 1000 egenomes database and in healthy controls with a frequency of 0.54% and 4%, 0.06% and 0%, respectively. Additionally, eight intron or 3 prime UTR variants showing benign clinical significance have also been identified. The results suggest that variants of SCN1B and SCN2B may not be common causes of DS according to this data. Further large sample-size cohort studies are needed to confirm our conclusion [3].

Ritter-Makinson et al., showed enhanced excitability in thalamic inhibitory neurons that promotes the non-convulsive seizures that are a prominent yet poorly understood feature of DS. In a mouse model of DS with a loss of function in Scn1a, reticular thalamic cells exhibited abnormally long bursts of firing caused by the downregulation of calcium-activated potassium SK channels. The study supports a mechanism in which loss of SK activity causes the reticular thalamic neurons to become hyperexcitable and promote non-convulsive seizures in DS. They propose that reduced excitability of inhibitory neurons is not global in DS and that non-GABAergic mechanisms such as SK channels may be important targets for treatment [4].

Treatment

Dravet Syndrome Treatment.

Unclassified articles

2: Billakota S, Devinsky O, Marsh E. Cannabinoid therapy in epilepsy. Curr Opin Neurol. 2019 Apr;32(2):220-226. doi: 10.1097/WCO.0000000000000660. PubMed PMID: 30676535.

3: Ritter-Makinson S, Clemente-Perez A, Higashikubo B, Cho FS, Holden SS, Bennett E, Chkhaidze A, Eelkman Rooda OHJ, Cornet MC, Hoebeek FE, Yamakawa K, Cilio MR, Delord B, Paz JT. Augmented Reticular Thalamic Bursting and Seizures in Scn1a-Dravet Syndrome. Cell Rep. 2019 Jan 2;26(1):54-64.e6. doi: 10.1016/j.celrep.2018.12.018. Erratum in: Cell Rep. 2019 Jan 22;26(4):1071. PubMed PMID: 30605686.

4: Shiraku H, Nakashima M, Takeshita S, Khoo CS, Haniffa M, Ch'ng GS, Takada K, Nakajima K, Ohta M, Okanishi T, Kanai S, Fujimoto A, Saitsu H, Matsumoto N, Kato M. PLPBP mutations cause variable phenotypes of developmental and epileptic encephalopathy. Epilepsia Open. 2018 Nov 1;3(4):495-502. doi: 10.1002/epi4.12272. eCollection 2018 Dec. PubMed PMID: 30525118; PubMed Central PMCID: PMC6276781.

5: Myers KA, Davey MJ, Ching M, Ellis C, Grinton BE, Roten A, Lightfoot PA, Scheffer IE. Randomized Controlled Trial of Melatonin for Sleep Disturbance in Dravet Syndrome: The DREAMS Study. J Clin Sleep Med. 2018 Oct 15;14(10):1697-1704. doi: 10.5664/jcsm.7376. PubMed PMID: 30353809; PubMed Central PMCID: PMC6175806.

6: Uchida CGP, de Carvalho KC, Guaranha MSB, Guilhoto LMFF, de Araújo Filho GM, Yacubian EMT. Prognosis of Juvenile myoclonic epilepsy with eye-closure sensitivity. Seizure. 2018 Nov;62:17-25. doi: 10.1016/j.seizure.2018.09.006. Epub 2018 Sep 17. PubMed PMID: 30248569.

7: Tiefes AM, Hartlieb T, Tacke M, von Stülpnagel-Steinbeis C, Larsen LHG, Hao Q, Dahl HA, Neubauer BA, Gerstl L, Kudernatsch M, Kluger GJ, Borggraefe I. Mesial Temporal Sclerosis in SCN1A-Related Epilepsy: Two Long-Term EEG Case Studies. Clin EEG Neurosci. 2018 Aug 17:1550059418794347. doi: 10.1177/1550059418794347. [Epub ahead of print] PubMed PMID: 30117335.

8: Sezikli S, Pulat TA, Tekin B, Ak PD, Keskinkılıç C, Ataklı D. Frontal lobe cognitive functions and electroencephalographic features in juvenile myoclonic epilepsy. Epilepsy Behav. 2018 Sep;86:102-107. doi: 10.1016/j.yebeh.2018.06.009. Epub 2018 Jul 13. PubMed PMID: 30017834.

9: Maroon J, Bost J. Review of the neurological benefits of phytocannabinoids. Surg Neurol Int. 2018 Apr 26;9:91. doi: 10.4103/sni.sni_45_18. eCollection 2018. Review. PubMed PMID: 29770251; PubMed Central PMCID: PMC5938896.

10: Büren C, Kamp MA, Munoz-Bendix C, Steiger HJ, Windolf J, Dibué-Adjei M. Can the combination of hyperthermia, seizures and ion channel dysfunction cause fatal post-ictal cerebral edema in patients with SCN1A mutations? Epilepsy Behav Case Rep. 2017 Dec 24;9:29-32. doi: 10.1016/j.ebcr.2017.12.003. eCollection 2018. PubMed PMID: 29692967; PubMed Central PMCID: PMC5913039.

11: Männikkö R, Wong L, Tester DJ, Thor MG, Sud R, Kullmann DM, Sweeney MG, Leu C, Sisodiya SM, FitzPatrick DR, Evans MJ, Jeffrey IJM, Tfelt-Hansen J, Cohen MC, Fleming PJ, Jaye A, Simpson MA, Ackerman MJ, Hanna MG, Behr ER, Matthews E. Dysfunction of NaV1.4, a skeletal muscle voltage-gated sodium channel, in sudden infant death syndrome: a case-control study. Lancet. 2018 Apr 14;391(10129):1483-1492. doi: 10.1016/S0140-6736(18)30021-7. Epub 2018 Apr 5. PubMed PMID: 29605429; PubMed Central PMCID: PMC5899997.

12: Bailey JN, de Nijs L, Bai D, Suzuki T, Miyamoto H, Tanaka M, Patterson C, Lin YC, Medina MT, Alonso ME, Serratosa JM, Durón RM, Nguyen VH, Wight JE, Martínez-Juárez IE, Ochoa A, Jara-Prado A, Guilhoto L, Molina Y, Yacubian EM, López-Ruiz M, Inoue Y, Kaneko S, Hirose S, Osawa M, Oguni H, Fujimoto S, Grisar TM, Stern JM, Yamakawa K, Lakaye B, Delgado-Escueta AV. Variant Intestinal-Cell Kinase in Juvenile Myoclonic Epilepsy. N Engl J Med. 2018 Mar 15;378(11):1018-1028. doi: 10.1056/NEJMoa1700175. PubMed PMID: 29539279.

13: van den Ende T, Sharifi S, van der Salm SMA, van Rootselaar AF. Familial Cortical Myoclonic Tremor and Epilepsy, an Enigmatic Disorder: From Phenotypes to Pathophysiology and Genetics. A Systematic Review. Tremor Other Hyperkinet Mov (N Y). 2018 Jan 23;8:503. doi: 10.7916/D85155WJ. eCollection 2018. Review. PubMed PMID: 29416935; PubMed Central PMCID: PMC5801339.

14: Knake S, Roth C, Belke M, Sonntag J, Kniess T, Krach S, Jansen A, Sommer J, Paulus FM, Carl B, Rosenow F, Hermsen AM, Menzler K. Microstructural white matter changes and their relation to neuropsychological deficits in patients with juvenile myoclonic epilepsy. Epilepsy Behav. 2017 Nov;76:56-62. doi: 10.1016/j.yebeh.2017.08.031. Epub 2017 Sep 18. PubMed PMID: 28927715.

15: Belousova ED, Zavadenko NN, Kholin AA, Sharkov AA. [New classifications of epilepsies and seizure types created by the International League against Epilepsy (2017)]. Zh Nevrol Psikhiatr Im S S Korsakova. 2017;117(7):99-106. doi: 10.17116/jnevro20171177199-106. Review. Russian. PubMed PMID: 28805769.

16: Dibué-Adjei M, Fischer I, Steiger HJ, Kamp MA. Efficacy of adjunctive vagus nerve stimulation in patients with Dravet syndrome: A meta-analysis of 68 patients. Seizure. 2017 Aug;50:147-152. doi: 10.1016/j.seizure.2017.06.007. Epub 2017 Jun 17. Review. PubMed PMID: 28666193.

17: Roldan S. [Epileptic encephalopathies in infancy. How do we treat them? Does the aetiology influence the response to treatment?]. Rev Neurol. 2017 May 17;64(s03):S71-S75. Review. Spanish. PubMed PMID: 28524224.

18: Oliver KL, Franceschetti S, Milligan CJ, Muona M, Mandelstam SA, Canafoglia L, Boguszewska-Chachulska AM, Korczyn AD, Bisulli F, Di Bonaventura C, Ragona F, Michelucci R, Ben-Zeev B, Straussberg R, Panzica F, Massano J, Friedman D, Crespel A, Engelsen BA, Andermann F, Andermann E, Spodar K, Lasek-Bal A, Riguzzi P, Pasini E, Tinuper P, Licchetta L, Gardella E, Lindenau M, Wulf A, Møller RS, Benninger F, Afawi Z, Rubboli G, Reid CA, Maljevic S, Lerche H, Lehesjoki AE, Petrou S, Berkovic SF. Myoclonus epilepsy and ataxia due to KCNC1 mutation: Analysis of 20 cases and K(+) channel properties. Ann Neurol. 2017 May;81(5):677-689. doi: 10.1002/ana.24929. PubMed PMID: 28380698.

19: Ali R, Elsayed M, Kaur M, Air E, Mahmood N, Constantinou J, Schwalb J. Use of social media to assess the effectiveness of vagal nerve stimulation in Dravet syndrome: A caregiver's perspective. J Neurol Sci. 2017 Apr 15;375:146-149. doi: 10.1016/j.jns.2017.01.057. Epub 2017 Jan 21. PubMed PMID: 28320117.

20: Møller RS, Wuttke TV, Helbig I, Marini C, Johannesen KM, Brilstra EH, Vaher U, Borggraefe I, Talvik

I, Talvik T, Kluger G, Francois LL, Lesca G, de Bellescize J, Blichfeldt S, Chatron N, Holert N, Jacobs J, Swinkels M, Betzler C, Syrbe S, Nikanorova M, Myers CT, Larsen LH, Vejzovic S, Pendziwiat M, von Spiczak S, Hopkins S, Dubbs H, Mang Y, Mukhin K, Holthausen H, van Gassen KL, Dahl HA, Tommerup N, Mefford HC, Rubboli G, Guerrini R, Lemke JR, Lerche H, Muhle H, Maljevic S. Mutations in GABRB3: From febrile seizures to epileptic encephalopathies. Neurology. 2017 Jan 31;88(5):483-492. doi: 10.1212/WNL.0000000000003565. Epub 2017 Jan 4. PubMed PMID: 28053010; PubMed Central PMCID: PMC5278942.

21: Verbeek N, Kasteleijn-Nolst Trenité D, Wassenaar M, van Campen J, Sonsma A, Gunning WB, de Weerd A, Knoers N, Spetgens W, Gutter T, Leijten F, Brilstra E. Photosensitivity in Dravet syndrome is under-recognized and related to prognosis. Clin Neurophysiol. 2017 Feb;128(2):323-330. doi: 10.1016/j.clinph.2016.11.021. Epub 2016 Dec 6. PubMed PMID: 28042998.

22: Sun Y, Zhang G, Zhang X, Yan X, Li L, Xu C, Yu T, Liu C, Zhu Y, Lin Y, Wang Y. Time-frequency analysis of intracranial EEG in patients with myoclonic seizures. Brain Res. 2016 Dec 1;1652:119-126. doi: 10.1016/j.brainres.2016.09.042. Epub 2016 Sep 28. PubMed PMID: 27693884.

23: Yacubian EM. Juvenile myoclonic epilepsy: Challenges on its 60th anniversary. Seizure. 2017 Jan;44:48-52. doi: 10.1016/j.seizure.2016.09.005. Epub 2016 Sep 15. Review. PubMed PMID: 27665373.

24: Michelucci R, Pasini E, Riguzzi P, Andermann E, Kälviäinen R, Genton P. Myoclonus and seizures in progressive myoclonus epilepsies: pharmacology and therapeutic trials. Epileptic Disord. 2016 Sep 1;18(S2):145-153. Review. PubMed PMID: 27629998.

25: Crespel A, Ferlazzo E, Franceschetti S, Genton P, Gouider R, Kälviäinen R, Korja M, Lehtinen MK, Mervaala E, Simonato M, Vaarmann A. Unverricht-Lundborg disease. Epileptic Disord. 2016 Sep 1;18(S2):28-37. Review. PubMed PMID: 27582036.

26: Bailey JN, Patterson C, de Nijs L, Durón RM, Nguyen VH, Tanaka M, Medina MT, Jara-Prado A, Martínez-Juárez IE, Ochoa A, Molina Y, Suzuki T, Alonso ME, Wight JE, Lin YC, Guilhoto L, Targas Yacubian EM, Machado-Salas J, Daga A, Yamakawa K, Grisar TM, Lakaye B, Delgado-Escueta AV. EFHC1 variants in juvenile myoclonic epilepsy: reanalysis according to NHGRI and ACMG guidelines for assigning disease causality. Genet Med. 2017 Feb;19(2):144-156. doi: 10.1038/gim.2016.86. Epub 2016 Jul 28. PubMed PMID: 27467453.

27: Dlouhy BJ, Miller B, Jeong A, Bertrand ME, Limbrick DD Jr, Smyth MD. Palliative epilepsy surgery in Dravet syndrome-case series and review of the literature. Childs Nerv Syst. 2016 Sep;32(9):1703-8. doi: 10.1007/s00381-016-3201-4. Epub 2016 Jul 27. Review. PubMed PMID: 27465677.

28: Henden L, Freytag S, Afawi Z, Baldassari S, Berkovic SF, Bisulli F, Canafoglia L, Casari G, Crompton DE, Depienne C, Gecz J, Guerrini R, Helbig I, Hirsch E, Keren B, Klein KM, Labauge P, LeGuern E, Licchetta L, Mei D, Nava C, Pippucci T, Rudolf G, Scheffer IE, Striano P, Tinuper P, Zara F, Corbett M, Bahlo M. Identity by descent fine mapping of familial adult myoclonus epilepsy (FAME) to 2p11.2-2q11.2. Hum Genet. 2016 Oct;135(10):1117-25. doi: 10.1007/s00439-016-1700-8. Epub 2016 Jul 1. PubMed PMID: 27368338.

29: Carvalho KC, Uchida CG, Guaranha MS, Guilhoto LM, Wolf P, Yacubian EM. Cognitive performance in juvenile myoclonic epilepsy patients with specific endophenotypes. Seizure. 2016 Aug;40:33-41. doi: 10.1016/j.seizure.2016.06.002. Epub 2016 Jun 15. PubMed PMID: 27343727.

30: Hernández-Vanegas LE, Jara-Prado A, Ochoa A, Rodríguez Y Rodríguez N, Durón RM, Crail-Meléndez D, Alonso ME, Delgado-Escueta AV, Martínez-Juárez IE. High-dose versus low-dose valproate

for the treatment of juvenile myoclonic epilepsy: Going from low to high. Epilepsy Behav. 2016 Aug;61:34-40. doi: 10.1016/j.yebeh.2016.04.047. Epub 2016 Jun 11. PubMed PMID: 27300146; PubMed Central PMCID: PMC4985524.

31: Vidal-Dourado M, Nunes KF, Guaranha MS, Giuliano LM, Yacubian EM, Manzano GM. Expression of praxis induction on cortical excitability in juvenile myoclonic epilepsy. Clin Neurophysiol. 2016 Jul;127(7):2551-60. doi: 10.1016/j.clinph.2016.03.028. Epub 2016 Apr 12. PubMed PMID: 27291873.

32: Balestrini S, Sisodiya SM. Audit of use of stiripentol in adults with Dravet syndrome. Acta Neurol Scand. 2017 Jan;135(1):73-79. doi: 10.1111/ane.12611. Epub 2016 May 27. PubMed PMID: 27231140; PubMed Central PMCID: PMC5157719.

33: Cantarín-Extremera V, Ruíz-Falcó-Rojas ML, Tamaríz-Martel-Moreno A, García-Fernández M, Duat-Rodriguez A, Rivero-Martín B. Late-onset periodic bradycardia during vagus nerve stimulation in a pediatric patient. A new case and review of the literature. Eur J Paediatr Neurol. 2016 Jul;20(4):678-83. doi: 10.1016/j.ejpn.2016.02.014. Epub 2016 Mar 16. Review. PubMed PMID: 27056279.

34: Chipaux M, Szurhaj W, Vercueil L, Milh M, Villeneuve N, Cances C, Auvin S, Chassagnon S, Napuri S, Allaire C, Derambure P, Marchal C, Caubel I, Ricard-Mousnier B, N'Guyen The Tich S, Pinard JM, Bahi-Buisson N, de Baracé C, Kahane P, Gautier A, Hamelin S, Coste-Zeitoun D, Rosenberg SD, Clerson P, Nabbout R, Kuchenbuch M, Picot MC, Kaminska A; GRENAT Group. Epilepsy diagnostic and treatment needs identified with a collaborative database involving tertiary centers in France. Epilepsia. 2016 May;57(5):757-69. doi: 10.1111/epi.13368. Epub 2016 Apr 1. PubMed PMID: 27037674.

35: de Souza PV, Batistella GN, Pinto WB, Oliveira AS. Teaching NeuroImages: Leukodystrophy and progressive myoclonic epilepsy disclosing DRPLA. Neurology. 2016 Feb 9;86(6):e58-9. doi: 10.1212/WNL.0000000000002356. PubMed PMID: 26857957.

36: Kälviäinen R, Genton P, Andermann E, Andermann F, Magaudda A, Frucht SJ, Schlit AF, Gerard D, de la Loge C, von Rosenstiel P. Brivaracetam in Unverricht-Lundborg disease (EPM1): Results from two randomized, double-blind, placebo-controlled studies. Epilepsia. 2016 Feb;57(2):210-21. doi: 10.1111/epi.13275. Epub 2015 Dec 15. PubMed PMID: 26666500.

37: Dejanovic B, Djémié T, Grünewald N, Suls A, Kress V, Hetsch F, Craiu D, Zemel M, Gormley P, Lal D; EuroEPINOMICS Dravet working group, Myers CT, Mefford HC, Palotie A, Helbig I, Meier JC, De Jonghe P, Weckhuysen S, Schwarz G. Simultaneous impairment of neuronal and metabolic function of mutated gephyrin in a patient with epileptic encephalopathy. EMBO Mol Med. 2015 Dec;7(12):1580-94. doi: 10.15252/emmm.201505323. Erratum in: EMBO Mol Med. 2017 Dec;9(12):1764. PubMed PMID: 26613940; PubMed Central PMCID: PMC4693503.

38: Uchida CG, de Carvalho KC, Guaranha MS, Guilhoto LM, de Araújo Filho GM, Wolf P, Yacubian EM. Phenotyping juvenile myoclonic epilepsy. Praxis induction as a biomarker of unfavorable prognosis. Seizure. 2015 Nov;32:62-8. doi: 10.1016/j.seizure.2015.09.011. Epub 2015 Sep 25. PubMed PMID: 26552565.

39: Skjei KL, Church EW, Harding BN, Santi M, Holland-Bouley KD, Clancy RR, Porter BE, Heuer GG, Marsh ED. Clinical and histopathological outcomes in patients with SCN1A mutations undergoing surgery for epilepsy. J Neurosurg Pediatr. 2015 Dec;16(6):668-74. doi: 10.3171/2015.5.PEDS14551. Epub 2015 Sep 4. PubMed PMID: 26339958.

40: Rektor I, Schachter SC, Arya R, Arzy S, Braakman H, Brodie MJ, Brugger P, Chang BS, Guekht A,

Hermann B, Hesdorffer DC, Jones-Gotman M, Kanner AM, Garcia-Larrea L, Mareš P, Mula M, Neufeld M, Risse GL, Ryvlin P, Seeck M, Tomson T, Korczyn AD. Third International Congress on Epilepsy, Brain, and Mind: Part 2. Epilepsy Behav. 2015 Sep;50:138-59. doi: 10.1016/j.yebeh.2015.07.014. Epub 2015 Aug 8. Review. PubMed PMID: 26264466.

41: Yacubian EM, Wolf P. Orofacial reflex myocloni. Definition, relation to epilepsy syndromes, nosological and prognosis significance. A focused review. Seizure. 2015 Aug;30:1-5. doi: 10.1016/j.seizure.2015.05.005. Epub 2015 May 14. Review. PubMed PMID: 26216677.

42: Nam TM, Cho KR, Youn J, Cho JW, Lee JI. Deep brain stimulation in a dentatorubral-pallidoluyisian atrophy patient with myoclonic dystonia. J Clin Neurosci. 2015 Dec;22(12):1976-8. doi: 10.1016/j.jocn.2015.04.010. Epub 2015 Jul 15. PubMed PMID: 26186965.

43: Wilmshurst JM, Gaillard WD, Vinayan KP, Tsuchida TN, Plouin P, Van Bogaert P, Carrizosa J, Elia M, Craiu D, Jovic NJ, Nordli D, Hirtz D, Wong V, Glauser T, Mizrahi EM, Cross JH. Summary of recommendations for the management of infantile seizures: Task Force Report for the ILAE Commission of Pediatrics. Epilepsia. 2015 Aug;56(8):1185-97. doi: 10.1111/epi.13057. Epub 2015 Jun 30. Review. PubMed PMID: 26122601.

44: Wolf P, Yacubian EM, Avanzini G, Sander T, Schmitz B, Wandschneider B, Koepp M. Juvenile myoclonic epilepsy: A system disorder of the brain. Epilepsy Res. 2015 Aug;114:2-12. doi: 10.1016/j.eplepsyres.2015.04.008. Epub 2015 Apr 27. Review. PubMed PMID: 26088880.

45: Verbeek NE, Wassenaar M, van Campen JS, Sonsma A, Gunning B, Knoers N, Lindhout D, Jansen FE, Leijten F, Brilstra EH, Kasteleijn-Nolst Trenité D. Seizure precipitants in Dravet syndrome: What events and activities are specifically provocative compared with other epilepsies? Epilepsy Behav. 2015 Jun;47:39-44. doi: 10.1016/j.yebeh.2015.05.008. Epub 2015 May 26. PubMed PMID: 26021464.

46: Fernandez L, Gedela S, Tamber M, Sogawa Y. Vagus nerve stimulation in children less than 3 years with medically intractable epilepsy. Epilepsy Res. 2015 May;112:37-42. doi: 10.1016/j.eplepsyres.2015.02.009. Epub 2015 Feb 16. PubMed PMID: 25847337.

47: Paulus FM, Krach S, Blanke M, Roth C, Belke M, Sommer J, Müller-Pinzler L, Menzler K, Jansen A, Rosenow F, Bremmer F, Einhäuser W, Knake S. Fronto-insula network activity explains emotional dysfunctions in juvenile myoclonic epilepsy: combined evidence from pupillometry and fMRI. Cortex. 2015 Apr;65:219-31. doi: 10.1016/j.cortex.2015.01.018. Epub 2015 Feb 7. PubMed PMID: 25754503.

48: Byoun HS, Yi HJ, Kim DW. Is Sevoflurane Responsible for Postoperative Myoclonic Seizure? J Neurosurg Anesthesiol. 2015 Oct;27(4):355-6. doi: 10.1097/ANA.0000000000000170. PubMed PMID: 25710299.

49: He ZW, Qu J, Zhang Y, Mao CX, Wang ZB, Mao XY, Deng ZY, Zhou BT, Yin JY, Long HY, Xiao B, Zhang Y, Zhou HH, Liu ZQ. PRRT2 mutations are related to febrile seizures in epileptic patients. Int J Mol Sci. 2014 Dec 16;15(12):23408-17. doi: 10.3390/ijms151223408. PubMed PMID: 25522171; PubMed Central PMCID: PMC4284774.

50: Yapijakis C, Gatzonis S, Youroukos S, Kollia V, Karachristianou S, Anagnostouli M. Juvenile myoclonic epilepsy is not associated with the DRPLA gene in a European population. In Vivo. 2014 Nov-Dec;28(6):1193-6. PubMed PMID: 25398822.

51: Jara-Prado A, Ochoa A, Alonso ME, Lima Villeda GA, Fernández-Valverde F, Ruano-Calderón L, Vargas-Cañas S, Durón RM, Delgado-Escueta AV, Martínez-Juárez IE. Late onset Lafora disease and novel EPM2A mutations: breaking paradigms. Epilepsy Res. 2014 Nov;108(9):1501-10. doi:

10.1016/j.eplepsyres.2014.08.017. Epub 2014 Aug 30. Erratum in: Epilepsy Res. 2015 Feb;110:228. PubMed PMID: 25246353.

52: Hall AM, Vilasi A, Garcia-Perez I, Lapsley M, Alston CL, Pitceathly RD, McFarland R, Schaefer AM, Turnbull DM, Beaumont NJ, Hsuan JJ, Cutillas PR, Lindon JC, Holmes E, Unwin RJ, Taylor RW, Gorman GS, Rahman S, Hanna MG. The urinary proteome and metabonome differ from normal in adults with mitochondrial disease. Kidney Int. 2015 Mar;87(3):610-22. doi: 10.1038/ki.2014.297. Epub 2014 Sep 10. PubMed PMID: 25207879.

53: Carvajal-González A, Leite MI, Waters P, Woodhall M, Coutinho E, Balint B, Lang B, Pettingill P, Carr A, Sheerin UM, Press R, Lunn MP, Lim M, Maddison P, Meinck HM, Vandenberghe W, Vincent A. Glycine receptor antibodies in PERM and related syndromes: characteristics, clinical features and outcomes. Brain. 2014 Aug;137(Pt 8):2178-92. doi: 10.1093/brain/awu142. Epub 2014 Jun 20. Erratum in: Brain. 2014 Dec;137(Pt 12):e315. Press, Raomand [corrected to Press, Rayomand]. PubMed PMID: 24951641; PubMed Central PMCID: PMC4107739.

54: Yacubian EM, Wolf P. Praxis induction. Definition, relation to epilepsy syndromes, nosological and prognostic significance. A focused review. Seizure. 2014 Apr;23(4):247-51. doi: 10.1016/j.seizure.2014.01.011. Epub 2014 Jan 23. Review. PubMed PMID: 24512781.

55: Hanganu A, Groppa SA, Deuschl G, Siebner H, Moeller F, Siniatchkin M, Stephani U, Groppa S. Cortical Thickness Changes Associated with Photoparoxysmal Response. Brain Topogr. 2015 Sep;28(5):702-709. doi: 10.1007/s10548-014-0353-y. Epub 2014 Feb 1. PubMed PMID: 24487625.

56: Mistry AM, Thompson CH, Miller AR, Vanoye CG, George AL Jr, Kearney JA. Strain- and age-dependent hippocampal neuron sodium currents correlate with epilepsy severity in Dravet syndrome mice. Neurobiol Dis. 2014 May;65:1-11. doi: 10.1016/j.nbd.2014.01.006. Epub 2014 Jan 14. PubMed PMID: 24434335; PubMed Central PMCID: PMC3968814.

57: Pugnaghi M, Carmichael DW, Vaudano AE, Chaudhary UJ, Benuzzi F, Di Bonaventura C, Giallonardo AT, Rodionov R, Walker MC, Duncan JS, Meletti S, Lemieux L. Generalized spike and waves: effect of discharge duration on brain networks as revealed by BOLD fMRI. Brain Topogr. 2014 Jan;27(1):123-37. doi: 10.1007/s10548-013-0311-0. Epub 2013 Aug 30. PubMed PMID: 23990340.

58: Tekin Güveli B, Baykan B, Dörtcan N, Bebek N, Gürses C, Gökyiğit A. Eye closure sensitivity in juvenile myoclonic epilepsy and its effect on prognosis. Seizure. 2013 Dec;22(10):867-71. doi: 10.1016/j.seizure.2013.07.008. Epub 2013 Aug 17. PubMed PMID: 23962522.

59: Machado RA, García VF, Astencio AG, Cuartas VB. Efficacy and tolerability of lamotrigine in juvenile myoclonic epilepsy in adults: a prospective, unblinded randomized controlled trial. Seizure. 2013 Dec;22(10):846-55. doi: 10.1016/j.seizure.2013.07.006. Epub 2013 Aug 1. PubMed PMID: 23916525.

60: de Araujo Filho GM, Yacubian EM. Juvenile myoclonic epilepsy: psychiatric comorbidity and impact on outcome. Epilepsy Behav. 2013 Jul;28 Suppl 1:S74-80. doi: 10.1016/j.yebeh.2013.03.026. PubMed PMID: 23756487.

61: Fan PC, Peng SS, Yen RF, Shieh JY, Kuo MF. Neuroimaging and electroencephalographic changes after vagus nerve stimulation in a boy with medically intractable myoclonic astatic epilepsy. J Formos Med Assoc. 2014 Apr;113(4):258-63. doi: 10.1016/j.jfma.2013.02.008. Epub 2013 May 3. Erratum in: J Formos Med Assoc. 2014 Oct;113(10):773. PubMed PMID: 23643463.

62: Lévesque M, Salami P, Behr C, Avoli M. Temporal lobe epileptiform activity following systemic

administration of 4-aminopyridine in rats. Epilepsia. 2013 Apr;54(4):596-604. doi: 10.1111/epi.12041. Epub 2012 Nov 28. PubMed PMID: 23521339; PubMed Central PMCID: PMC4878895.

63: Trimble M. Treatment issues for personality disorders in epilepsy. Epilepsia. 2013 Mar;54 Suppl 1:41-5. doi: 10.1111/epi.12104. Review. PubMed PMID: 23458465.

64: Shiraishi H, Haginoya K, Nakagawa E, Saitoh S, Kaneko Y, Nakasato N, Chan D, Otsubo H. Magnetoencephalography localizing spike sources of atypical benign partial epilepsy. Brain Dev. 2014 Jan;36(1):21-7. doi: 10.1016/j.braindev.2012.12.011. Epub 2013 Feb 4. PubMed PMID: 23384398.

65: Herzig DW, Stemer AB, Bell RS, Liu AH, Armonda RA, Bank WO. Neurological sequelae from brachiocephalic vein stenosis. J Neurosurg. 2013 May;118(5):1058-62. doi: 10.3171/2013.1.JNS121529. Epub 2013 Feb 1. PubMed PMID: 23373799.

66: Hajnsek S, Petelin Gadze Z, Borovecki F, Nankovic S, Mrak G, Gotovac K, Sulentic V, Kovacevic I, Bujan Kovac A. Vagus nerve stimulation in Lafora body disease. Epilepsy Behav Case Rep. 2013 Sep 27;1:150-2. doi: 10.1016/j.ebcr.2013.08.002. eCollection 2013. PubMed PMID: 25667850; PubMed Central PMCID: PMC4150640.

67: Jara-Prado A, Martínez-Juárez IE, Ochoa A, González VM, Fernández-González-Aragón Mdel C, López-Ruiz M, Medina MT, Bailey JN, Delgado-Escueta AV, Alonso ME. Novel Myoclonin1/EFHC1 mutations in Mexican patients with juvenile myoclonic epilepsy. Seizure. 2012 Sep;21(7):550-4. doi: 10.1016/j.seizure.2012.05.016. Epub 2012 Jun 22. PubMed PMID: 22727576.

68: Larsson PG, Bakke KA, Bjørnæs H, Heminghyt E, Rytter E, Brager-Larsen L, Eriksson AS. The effect of levetiracetam on focal nocturnal epileptiform activity during sleep–a placebo-controlled double-blind cross-over study. Epilepsy Behav. 2012 May;24(1):44-8. doi: 10.1016/j.yebeh.2012.02.024. Epub 2012 Apr 10. PubMed PMID: 22494796.

69: Keller SS, Gerdes JS, Mohammadi S, Kellinghaus C, Kugel H, Deppe K, Ringelstein EB, Evers S, Schwindt W, Deppe M. Volume estimation of the thalamus using freesurfer and stereology: consistency between methods. Neuroinformatics. 2012 Oct;10(4):341-50. doi: 10.1007/s12021-012-9147-0. PubMed PMID: 22481382; PubMed Central PMCID: PMC3464372.

70: Dagar A, Chandra PS, Chaudhary K, Avnish C, Bal CS, Gaikwad S, Garg A, Sarkar C, Srivastava A, Padma MV, Rekha D, Gulati S, Paul V, Prasad K, Singh MB, Tripathi M. Epilepsy surgery in a pediatric population: a retrospective study of 129 children from a tertiary care hospital in a developing country along with assessment of quality of life. Pediatr Neurosurg. 2011;47(3):186-93. doi: 10.1159/000334257. Epub 2011 Dec 29. PubMed PMID: 22213776.

71: Keezer MR, Saint-Hilaire JM, Nguyen DK. Fronto-polar epilepsy masquerading as juvenile myoclonic epilepsy. Epileptic Disord. 2011 Sep;13(3):317-20. doi: 10.1684/epd.2011.0449. PubMed PMID: 21865125.

72: Catarino CB, Liu JY, Liagkouras I, Gibbons VS, Labrum RW, Ellis R, Woodward C, Davis MB, Smith SJ, Cross JH, Appleton RE, Yendle SC, McMahon JM, Bellows ST, Jacques TS, Zuberi SM, Koepp MJ, Martinian L, Scheffer IE, Thom M, Sisodiya SM. Dravet syndrome as epileptic encephalopathy: evidence from long-term course and neuropathology. Brain. 2011 Oct;134(Pt 10):2982-3010. doi: 10.1093/brain/awr129. Epub 2011 Jun 29. PubMed PMID: 21719429; PubMed Central PMCID: PMC3187538.

73: de Araújo Filho GM, da Silva JM, Mazetto L, Marchetti RL, Yacubian EM. Psychoses of epilepsy: a study comparing the clinical features of patients with focal versus generalized epilepsies. Epilepsy

Behav. 2011 Apr;20(4):655-8. doi: 10.1016/j.yebeh.2011.01.024. Epub 2011 Mar 29. PubMed PMID: 21450532.

74: Akiyama T, Donner EJ, Go CY, Ochi A, Snead OC 3rd, Rutka JT, Otsubo H. Focal-onset myoclonic seizures and secondary bilateral synchrony. Epilepsy Res. 2011 Jun;95(1-2):168-72. doi: 10.1016/j.eplepsyres.2011.02.006. Epub 2011 Mar 5. PubMed PMID: 21377332.

75: Liimatainen S, Lehtimäki K, Raitala A, Peltola M, Oja SS, Peltola J, Hurme MA. Increased indoleamine 2,3-dioxygenase (IDO) activity in idiopathic generalized epilepsy. Epilepsy Res. 2011 May;94(3):206-12. doi: 10.1016/j.eplepsyres.2011.02.003. Epub 2011 Mar 4. PubMed PMID: 21377330.

76: Filho GM, Mazetto L, da Silva JM, Caboclo LO, Yacubian EM. Psychiatric comorbidity in patients with two prototypes of focal versus generalized epilepsy syndromes. Seizure. 2011 Jun;20(5):383-6. doi: 10.1016/j.seizure.2011.01.007. Epub 2011 Feb 11. PubMed PMID: 21316266.

77: Wille C, Steinhoff BJ, Altenmüller DM, Staack AM, Bilic S, Nikkhah G, Vesper J. Chronic high-frequency deep-brain stimulation in progressive myoclonic epilepsy in adulthood–report of five cases. Epilepsia. 2011 Mar;52(3):489-96. doi: 10.1111/j.1528-1167.2010.02884.x. Epub 2011 Jan 10. PubMed PMID: 21219312.

78: Vulliemoz S, Vollmar C, Koepp MJ, Yogarajah M, O'Muircheartaigh J, Carmichael DW, Stretton J, Richardson MP, Symms MR, Duncan JS. Connectivity of the supplementary motor area in juvenile myoclonic epilepsy and frontal lobe epilepsy. Epilepsia. 2011 Mar;52(3):507-14. doi: 10.1111/j.1528-1167.2010.02770.x. Epub 2010 Nov 3. PubMed PMID: 21054353.

79: Guaranha MS, Filho GM, Lin K, Guilhoto LM, Caboclo LO, Yacubian EM. Prognosis of juvenile myoclonic epilepsy is related to endophenotypes. Seizure. 2011 Jan;20(1):42-8. doi: 10.1016/j.seizure.2010.10.004. Epub 2010 Oct 30. PubMed PMID: 21041102.

80: Scanlon A, Cook SS. Febrile seizures, genetic (generalized) epilepsy with febrile seizures plus, and Dravet's syndrome. J Spec Pediatr Nurs. 2010 Apr;15(2):154-9. doi: 10.1111/j.1744-6155.2010.00230.x. PubMed PMID: 20367785.

81: Arlier Z, Bayri Y, Kolb LE, Erturk O, Ozturk AK, Bayrakli F, Bilguvar K, Moliterno JA, Dervent A, Demirbilek V, Yalcinkaya C, Korkmaz B, Tuysuz B, Gunel M. Four novel SCN1A mutations in Turkish patients with severe myoclonic epilepsy of infancy (SMEI). J Child Neurol. 2010 Oct;25(10):1265-8. doi: 10.1177/0883073809357241. Epub 2010 Jan 28. PubMed PMID: 20110217.

82: Korja M, Ferlazzo E, Soilu-Hänninen M, Magaudda A, Marttila R, Genton P, Parkkola R. T2-weighted high-intensity signals in the basal ganglia as an interesting image finding in Unverricht-Lundborg disease. Epilepsy Res. 2010 Jan;88(1):87-91. doi: 10.1016/j.eplepsyres.2009.09.018. Epub 2009 Nov 6. PubMed PMID: 19896804.

83: Wheless JW. Managing severe epilepsy syndromes of early childhood. J Child Neurol. 2009 Aug;24(8 Suppl):24S-32S; quiz 33S-6S. doi: 10.1177/0883073809338153. Review. PubMed PMID: 19666880.

84: Simard-Tremblay E, Shevell M. A profile of adolescent-onset epilepsy. J Child Neurol. 2009 Oct;24(10):1243-9. doi: 10.1177/0883073809334381. Epub 2009 Aug 11. PubMed PMID: 19671891.

85: Guaranha MS, da Silva Sousa P, de Araújo-Filho GM, Lin K, Guilhoto LM, Caboclo LO, Yacubian EM. Provocative and inhibitory effects of a video-EEG neuropsychologic protocol in juvenile myoclonic

epilepsy. Epilepsia. 2009 Nov;50(11):2446-55. doi: 10.1111/j.1528-1167.2009.02126.x. Epub 2009 May 12. PubMed PMID: 19453714.

86: Rosado Fuentes E, Martínez Navas A, Laguillo Cadenas JL, Echevarría Moreno M. [Spinal anesthesia in a patient with Angelman syndrome]. Rev Esp Anestesiol Reanim. 2009 Jan;56(1):56-7. Spanish. PubMed PMID: 19284134.

87: Tanriverdi T, Olivier A, Poulin N, Andermann F, Dubeau F. Long-term seizure outcome after corpus callosotomy: a retrospective analysis of 95 patients. J Neurosurg. 2009 Feb;110(2):332-42. doi: 10.3171/2008.3.17570. PubMed PMID: 19245287.

88: Azevedo AM, Alonso NB, Vidal-Dourado M, Noffs MH, Pascalicchio TF, Caboclo LO, Ciconelli RM, Sakamoto AC, Yacubian EM. Validity and reliability of the Portuguese-Brazilian version of the Quality of Life in Epilepsy Inventory-89. Epilepsy Behav. 2009 Mar;14(3):465-71. doi: 10.1016/j.yebeh.2008.12.010. Epub 2009 Jan 10. PubMed PMID: 19138756.

89: Ragsdale DS. How do mutant Nav1.1 sodium channels cause epilepsy? Brain Res Rev. 2008 Jun;58(1):149-59. doi: 10.1016/j.brainresrev.2008.01.003. Epub 2008 Feb 7. Review. PubMed PMID: 18342948.

90: Rijkers K, Berfelo MW, Cornips EM, Majoie HJ. Hardware failure in vagus nerve stimulation therapy. Acta Neurochir (Wien). 2008 Apr;150(4):403-5. doi: 10.1007/s00701-007-1492-7. Epub 2008 Feb 19. PubMed PMID: 18278574.

91: Vesper J, Steinhoff B, Rona S, Wille C, Bilic S, Nikkhah G, Ostertag C. Chronic high-frequency deep brain stimulation of the STN/SNr for progressive myoclonic epilepsy. Epilepsia. 2007 Oct;48(10):1984-9. Epub 2007 Jun 11. PubMed PMID: 17561948.

92: Rahimi SY, Park YD, Witcher MR, Lee KH, Marrufo M, Lee MR. Corpus callosotomy for treatment of pediatric epilepsy in the modern era. Pediatr Neurosurg. 2007;43(3):202-8. PubMed PMID: 17409789.

93: Piantino JA, Torres A. Myoclonic seizures in a patient with Charcot-Marie-tooth disease. Pediatr Neurol. 2007 Feb;36(2):118-20. PubMed PMID: 17275665.

94: Besag FM. Cognitive and behavioral outcomes of epileptic syndromes: implications for education and clinical practice. Epilepsia. 2006;47 Suppl 2:119-25. Review. PubMed PMID: 17105481.

95: Kwan SY, Lin JH, Wong TT, Chang KP, Yiu CH. Prognostic value of electrocorticography findings during callosotomy in children with Lennox-Gastaut syndrome. Seizure. 2005 Oct;14(7):470-5. Epub 2005 Aug 30. PubMed PMID: 16137897.

96: da Silva Sousa P, Lin K, Garzon E, Sakamoto AC, Yacubian EM. Self-perception of factors that precipitate or inhibit seizures in juvenile myoclonic epilepsy. Seizure. 2005 Jul;14(5):340-6. PubMed PMID: 15955714.

97: Ferlazzo E, Zifkin BG, Andermann E, Andermann F. Cortical triggers in generalized reflex seizures and epilepsies. Brain. 2005 Apr;128(Pt 4):700-10. Epub 2005 Feb 23. Review. PubMed PMID: 15728654.

98: Mann MW, Gueguen B, Guillou S, Debrand E, Soufflet C. Chess-playing epilepsy: a case report with video-EEG and back averaging. Epileptic Disord. 2004 Dec;6(4):293-6. PubMed PMID: 15634627.

99: Wheless JW. Nonpharmacologic treatment of the catastrophic epilepsies of childhood. Epilepsia.

2004;45 Suppl 5:17-22. Review. PubMed PMID: 15283707.

100: Cif L, Valente EM, Hemm S, Coubes C, Vayssiere N, Serrat S, Di Giorgio A, Coubes P. Deep brain stimulation in myoclonus-dystonia syndrome. Mov Disord. 2004 Jun;19(6):724-7. PubMed PMID: 15197720.

101: Chabardès S, Kahane P, Minotti L, Koudsie A, Hirsch E, Benabid AL. Deep brain stimulation in epilepsy with particular reference to the subthalamic nucleus. Epileptic Disord. 2002 Dec;4 Suppl 3:S83-93. PubMed PMID: 12495878.

102: Ono T, Matsuo A, Baba H, Ono K. Is a cortical spike discharge “transferred” to the contralateral cortex via the corpus callosum?: An intraoperative observation of electrocorticogram and callosal compound action potentials. Epilepsia. 2002 Dec;43(12):1536-42. PubMed PMID: 12460256.

103: D'Agostino MD, Bernasconi A, Das S, Bastos A, Valerio RM, Palmini A, Costa da Costa J, Scheffer IE, Berkovic S, Guerrini R, Dravet C, Ono J, Gigli G, Federico A, Booth F, Bernardi B, Volpi L, Tassinari CA, Guggenheim MA, Ledbetter DH, Gleeson JG, Lopes-Cendes I, Vossler DG, Malaspina E, Franzoni E, Sartori RJ, Mitchell MH, Mercho S, Dubeau F, Andermann F, Dobyns WB, Andermann E. Subcortical band heterotopia (SBH) in males: clinical, imaging and genetic findings in comparison with females. Brain. 2002 Nov;125(Pt 11):2507-22. PubMed PMID: 12390976.

104: Lin SM, Tsou MY, Chan KH, Yin YC, Hsin ST, Liao WW, Mok MS, Tsai SK. Myoclonic seizure in the postanesthesia care unit after thoracic laminectomy. Anesth Analg. 2002 Sep;95(3):777-9, table of contents. PubMed PMID: 12198071.

105: Badhwar A, Siren A, Andermann E, Andermann F. Myoclonic status epilepticus: video presentation. Mov Disord. 2002 Mar;17(2):409-11. PubMed PMID: 11921135.

106: Campos-Castelló J. [Therapeutic strategy in severe encephalopathies]. Rev Neurol. 2001 May 1-15;32(9):860-6. Review. Spanish. PubMed PMID: 11424039.

107: Ohta Y, Nariai T, Akimoto H, Shimohira M, Sugimoto J, Ohno K, Senda M, Hirakawa K. Tuberous sclerosis: epileptogenicity and multimodal presurgical evaluations. Childs Nerv Syst. 2001 May;17(6):313-9. PubMed PMID: 11417410.

108: Morris HR, Howard RS, Brown P. Early myoclonic status and outcome after cardiorespiratory arrest. J Neurol Neurosurg Psychiatry. 1998 Feb;64(2):267-8. PubMed PMID: 9489546; PubMed Central PMCID: PMC2169949.

109: Melanson M, Nalbantoglu J, Berkovic S, Melmed C, Andermann E, Roberts LJ, Carpenter S, Snipes GJ, Andermann F. Progressive myoclonus epilepsy in young adults with neuropathologic features of Alzheimer's disease. Neurology. 1997 Dec;49(6):1732-3. PubMed PMID: 9409382.

110: Duncan JS. Idiopathic generalized epilepsies with typical absences. J Neurol. 1997 Jul;244(7):403-11. Review. PubMed PMID: 9266457.

111: Footitt DR, Quinn N, Kocen RS, Oz B, Scaravilli F. Familial Lafora body disease of late onset: report of four cases in one family and a review of the literature. J Neurol. 1997 Jan;244(1):40-4. Review. PubMed PMID: 9007744.

112: Li LM, O'Donoghue MF, Sander JW. Myoclonic epilepsy of late onset in trisomy 21. Arq Neuropsiquiatr. 1995 Dec;53(4):792-4. Review. PubMed PMID: 8729775.

113: Yamamoto K, Tanaka T, Yonemasu Y. [Jacksonian seizure model induced by a kainic acid microinjection into unilateral sensori-motor cortex]. No To Shinkei. 1995 May;47(5):477-83. Japanese. PubMed PMID: 7786624.

114: Obeso JA. Therapy of myoclonus. Clin Neurosci. 1995-1996;3(4):253-7. Review. PubMed PMID: 8891399.

115: Cochius J, Carpenter S, Andermann E, Rouleau G, Nousiainen U, Kalviainen R, Farrell K, Andermann F. Sweat gland vacuoles in Unverricht-Lundborg disease: a clue to diagnosis? Neurology. 1994 Dec;44(12):2372-5. PubMed PMID: 7991128.

116: Grünewald RA, Panayiotopoulos CP. Diagnosing juvenile myoclonic epilepsy in an elderly patient. Seizure. 1994 Sep;3(3):239-41. PubMed PMID: 8000720.

117: Löscher W, Hönack D. Profile of ucb L059, a novel anticonvulsant drug, in models of partial and generalized epilepsy in mice and rats. Eur J Pharmacol. 1993 Mar 2;232(2-3):147-58. PubMed PMID: 8467854.

118: Andermann L, Andermann F. University students with epilepsy: a study of social aspects. Seizure. 1992 Sep;1(3):173-6. PubMed PMID: 1344763.

119: Velasco M, Velasco F, Alcalá H, Dávila G, Díaz-de-León AE. Epileptiform EEG activity of the centromedian thalamic nuclei in children with intractable generalized seizures of the Lennox-Gastaut syndrome. Epilepsia. 1991 May-Jun;32(3):310-21. PubMed PMID: 1904342.

120: Velasco M, Velasco F, Alcalá H, Díaz de León AE. Wakefulness-sleep modulation of EEG-EMG epileptiform activities: a quantitative study on a child with intractable epilepsia partialis continua. Int J Neurosci. 1990 Oct;54(3-4):325-37. PubMed PMID: 2125031.

121: Andermann F, Berkovic S, Carpenter S, Andermann E. The Ramsay Hunt syndrome is no longer a useful diagnostic category. Mov Disord. 1989;4(1):13-7. Review. PubMed PMID: 2494436.

122: Savchenko IuN, Genne RI. [Problems in the surgical treatment of epilepsy]. Zh Vopr Neirokhir Im N N Burdenko. 1984 Jan-Feb;(1):52-7. Review. Russian. PubMed PMID: 6424366.

123: MILLETTI M, ROVETTA P. [The possible focal cortical genesis of some types of myoclonic epilepsy disclosed by performing a prefrontal lobotomy]. Arch Neurobiol (Madr). 1957 Jul-Dec;4:171-94. Italian. PubMed PMID: 14474135.

124: DAUM S, FONCIN JF, LE BEAU J. [Applications of psychosurgery to the treatment of dyskinesias; case of myoclonus epilepsy with continuous rhythmic clonus of the upper extremities]. Rev Neurol (Paris). 1954;90(2):114-22. French. PubMed PMID: 13195338.

1)

Dravet C, Bureau M. [The benign myoclonic epilepsy of infancy (author's transl)]. Rev Electroencephalogr Neurophysiol Clin. 1981 Dec;11(3-4):438-44. French. PubMed PMID: 6808601.

2)

Dlouhy BJ, Miller B, Jeong A, Bertrand ME, Limbrick DD Jr, Smyth MD. Palliative epilepsy surgery in Dravet syndrome-case series and review of the literature. Childs Nerv Syst. 2016 Sep;32(9):1703-8. doi: 10.1007/s00381-016-3201-4. Epub 2016 Jul 27. Review. PubMed PMID: 27465677.

3)

Gong JE, Liao HM, Long HY, Li XM, Long LL, Zhou L, Gu WP, Lu SH, Qu Q, Yang LM, Xiao B, Qu J. SCN1B and SCN2B gene variants analysis in dravet syndrome patients: Analysis of 22 cases. Medicine

(Baltimore). 2019 Mar;98(13):e14974. doi: 10.1097/MD.0000000000014974. PubMed PMID: 30921204.

4)

Ritter-Makinson S, Clemente-Perez A, Higashikubo B, Cho FS, Holden SS, Bennett E, Chkaidze A, Eelkman Rooda OHJ, Cornet MC, Hoebeek FE, Yamakawa K, Cilio MR, Delord B, Paz JT. Augmented Reticular Thalamic Bursting and Seizures in Scn1a-Dravet Syndrome. Cell Rep. 2019 Jan 2;26(1):54-64.e6. doi: 10.1016/j.celrep.2018.12.018. PubMed PMID: 30605686.