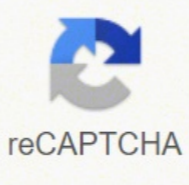




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Next

Refractory epilepsy guidelines

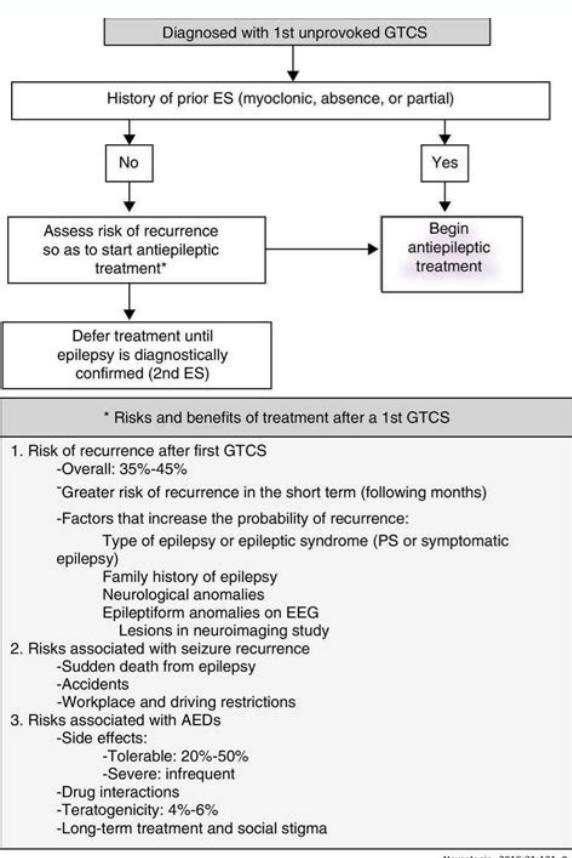


Table 3. Course of Therapy for Patients With Refractory Status Epilepticus (RSE)

Patient	Initial ICU Stay, d	Treatments	MAC-hours of sedation	RSE Prior to ICU, n	Other AEDs Tried During RSE
1	53	20	27	33.8 (2)	3 LFP, etazepam, MDL, PHT, PB, TS, PRO, VPA, LMT
2	15	11	11	151.4 (2)	1 LFP, etazepam, MDL, PHT, PB, TS, PRO, VPA, LMT
3	49	27	18	151.4 (2)	1 LFP, etazepam, etomidate, MDL, PRO, GZ, VPA, GBP, TPM
4	34	58	56	275.9 (26)*	10 LFP, etazepam, etomidate, MDL, PHT, PB, PTH, TS, PRO, GZ, VPA, LMT, TPM, TPM, desflurane, 1.4
5	67	67	57	11.6 (19)	103 LFP, etazepam, MDL, PHT, PB, primidone, PTH, TS, PRO, GZ, VPA, etomidate, LMT, VGS, TPM, desflurane
6	9	9	9	248.3 (2)	2 LFP, MDL, PHT, PB, GZ, VPA, LMT, fentanyl citrate
7	18	17	17	443.3 (15)	2 LFP, etazepam, MDL, PHT, PB, PRO, GZ

Abbreviations: AED, antiepileptic drug; GZ, gabapentin; LFP, gabapentin; ICU, intensive care unit; LMT, lamotrigine; LFP, lorazepam; MDL, midazolam; MDL, midazolam; PHT, phenytoin; PTH, propofol; PRO, propofol; TPM, topiramate; TS, thiopental sodium; VGS, vigabatrin; VPA, valproic acid.
*255.9 MAC-hours (19 days) of desflurane and 59 MAC-hours (7 days) of sufentanil.

EPI.....

- Epilepsy - prevalence ~ 5/1000
- Incidence ~ 50/100,000/year.
- Assuming that 20% of patients with active epilepsy would be resistant to AED treatment
- One bn population of India,
- There would be about one mn people with medically refractory epilepsy.

AAN Guideline Treatments For Refractory Epilepsy

USE OF AEDs IN MANAGEMENT OF REFRACTORY PARTIAL EPILEPSY

AED	As adjunctive therapy in adults	As adjunctive therapy in children	As monotherapy
Gabapentin	It is appropriate to use gabapentin as add-on therapy in patients with refractory epilepsy (Level A*).	Gabapentin may be used as adjunctive treatment of children with refractory partial seizures (Level A).	There is insufficient evidence to recommend use of gabapentin as monotherapy for refractory partial epilepsy (Level U).
Lamotrigine	It is appropriate to use lamotrigine as add-on therapy in patients with refractory epilepsy (Level A).	Lamotrigine may be used as adjunctive treatment of children with refractory partial seizures (Level A).	Lamotrigine can be used as monotherapy in patients with refractory partial epilepsy (Level B, downgraded due to despoth).
Topiramate	It is appropriate to use topiramate as add-on therapy in patients with refractory epilepsy (Level A).	Topiramate may be used as adjunctive treatment of children with refractory partial seizures (Level A).	Topiramate can be used as monotherapy in patients with refractory partial epilepsy (Level A).
Tiagabine	It is appropriate to use tiagabine as add-on therapy in patients with refractory epilepsy (Level A).		There is insufficient evidence to recommend use of tiagabine as monotherapy for refractory partial epilepsy (Level U).
Oxcarbazepine	It is appropriate to use oxcarbazepine as add-on therapy in patients with refractory epilepsy (Level A).	Oxcarbazepine may be used as adjunctive treatment of children with refractory partial seizures (Level A).	Oxcarbazepine can be used as monotherapy in patients with refractory seizures (Level A).
Levetiracetam	It is appropriate to use levetiracetam as add-on therapy in patients with refractory epilepsy (Level A).		There is insufficient evidence to recommend use of levetiracetam as monotherapy for refractory partial epilepsy (Level U).
Zonisamide	It is appropriate to use zonisamide as add-on therapy in patients with refractory epilepsy (Level A).		There is insufficient evidence to recommend use of zonisamide as monotherapy for refractory partial epilepsy (Level U).

Note: Felbamate was assessed in a prior guideline. See "Practice Advisory: The use of Felbamate in the treatment of patients with intractable epilepsy" Neurology 1999;52:1540-1545

USE OF AEDs IN REFRACTORY PRIMARY GENERALIZED EPILEPSY AND LENNOX GASTAUT SYNDROME

AED	Refractory Primary Generalized Epilepsy	Lennox Gastaut Syndrome
Gabapentin	There is insufficient evidence to recommend gabapentin for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level U).	
Lamotrigine	There is insufficient evidence to recommend lamotrigine for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level U).	Lamotrigine may be used to treat drop attacks associated with the Lennox Gastaut syndrome in adults and children (Level A).
Topiramate	Topiramate may be used for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level A).	Topiramate may be used to treat drop attacks associated with the Lennox Gastaut syndrome in adults and children (Level A).
Tiagabine	There is insufficient evidence to recommend tiagabine for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level U).	
Oxcarbazepine	There is insufficient evidence to recommend oxcarbazepine for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level U).	
Levetiracetam	There is insufficient evidence to recommend levetiracetam for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level U).	
Zonisamide	There is insufficient evidence to recommend zonisamide for the treatment of refractory generalized tonic-clonic seizures in adults and children (Level U).	

Refractory epilepsy treatment guidelines. Ketogenic diet guidelines for infants with refractory epilepsy. Nice guidelines refractory epilepsys.

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Retommendations for the treatment of epilepsy in adult and pediatric patients in Belgium: 2020 update Product Reimbursed and non-reimbursed indications Route Side effectsb Pharmacokinetic interactions: Caution in patients withl Brivaracetam R: focal-onset, add-on after failure ≥ 3 AEDs, age ≥ 4 y NR: focal-onset, add-on, age ≥ 4 y p.o. + i.v. ≥ 1/10: dizziness, somnolence, behavioral changes (children) Selected: suicidal thoughts 0 Liver impairment, pregnancy (data lacking) Carbamazepine R: focal-onset, generalized-onset [GTCS], mono + add-on, any age p.o. ≥ 1/10: dizziness, ataxia, somnolence, fatigue, nausea, vomiting, allergic dermatitis, urticaria, leukopenia, elevated γ-GT (usually not clinically relevant) Selected: serious skin reactions/hypersensitivity (SJS, TEN, DRESS), blood dyscrasia, osteoporosis, osteomalacia, behavioral changes (suicidal thoughts), liver dysfunction, AV block + + + Older age, history of heart, liver or kidney disease, history of drug-induced hematological reactions or oxcarbazepine/phenytoin-induced hypersensitivity, elevated intra-ocular pressure, mixed seizures, pregnancy (teratogen) Contra-indications: AV block, history of bone marrow depression or hepatic porphyria, combination with MAO inhibitors Ethosuximide R: generalized-onset [absence, atonic, myoclonic], mono + add-on, age ≥ 3 y p.o. ≥ 1/10: none Selected: abdominal discomfort, serious skin reactions/hypersensitivity (SJS, DRESS), SLE, blood dyscrasia, suicidal thoughts, liver and kidney dysfunction, psychosis 0 Liver and kidney disease, mixed seizures, pregnancy (teratogen) Felbamate R: Lennox-Gastaut (if refractory to all relevant AEDs), add-on, age ≥ 4y p.o. ≥ 1/10: none Selected: serious skin reactions/hypersensitivity (SJS, anaphylaxis), severe blood dyscrasia (incl.[plastic] anemia: 30% fatal), severe hepatotoxicity (30% fatal), suicidal thoughts + + + Pregnancy (data lacking) Contra-indications: history of blood dyscrasia, liver disease Gabapentin R: focal-onset, add-on, age ≥ 6 y NR: focal-onset, mono, age ≥ 12 y p.o. ≥ 1/10: dizziness, ataxia, somnolence, fatigue, fever, viral infection Selected: weight gain, serious skin reactions/hypersensitivity (DRESS, anaphylaxis), suicidal thoughts, acute pancreatitis, respiratory depression 0 Use of opioids or other CNS depressants, underlying respiratory condition, older age, renal failure, neurological disease, history of drug abuse, mixed seizures, pregnancy (teratogen) Lacosamide R: focal-onset, add-on after failure ≥ 3 AEDs, age ≥ 4 y NR: focal-onset, mono + add-on, age ≥ 4y p.o. + i.v. ≥ 1/10: dizziness, headache, nausea, diplopia Selected: prolonged PR interval, AV block, suicidal thoughts 0 Underlying proarrhythmic conditions, treatment with compounds affecting cardiac conduction, older age, pregnancy (data lacking) Contra-indications: 2nd or 3rd degree AV block Lamotrigine R: focal-onset, generalized-onset [GTCS], mono, age ≥ 12 y, add-on, age ≥ 2 y R: absence, mono + add-on, age ≥ 2 y NR: Lennox-Gastaut, mono, age ≥ 13 y, add-on, age ≥ 2 y p.o. ≥ 1/10: headache, rash Selected: serious skin reactions/hypersensitivity (SJS, TEN, DRESS), hemophagocytic lymphohistiocytosis, osteoporosis, suicidal thoughts, arrhythmicgen ST-T abnormality, Brugada ECG, insomnia, hallucinations + + History of rash or allergy to other AEDs, bipolar and other psychiatric disorders, kidney failure, Brugada syndrome, myoclonic seizures Levetiracetam R: focal-onset, mono, age ≥ 16 y, add-on, age ≥ 1 m R: myoclonic in JME, add-on, age ≥ 12y NR: generalized-onset [GTCS] in patients with IGE, add-on, age ≥ 12 y p.o. + i.v. ≥ 1/10: somnolence, headache Selected: acute kidney injury, blood dyscrasia, suicidal thoughts, behavioral changes 0 Kidney or severe liver dysfunction Oxcarbazepine R: focal-onset, mono + add-on, age ≥ 6 y p.o. ≥ 1/10: dizziness, somnolence, fatigue, headache, nausea, vomiting, diplopia Selected: severe acute hypersensitivity (SJS, TEN, anaphylaxis), hyponatremia, cardiac conduction defects, liver dysfunction, hypothyroid, blood dyscrasia, osteoporosis, suicidal thoughts + Heart, liver or kidney disease, history of carbamazepine-induced hypersensitivity, treatment with sodium-lowering drugs Perampanel R: focal-onset, add-on after failure ≥ 3 AEDs, age ≥ 12 y NR: focal-onset, generalized-onset [GTCS] in patients with IGE, add-on, age ≥ 12 y p.o. ≥ 1/10: dizziness, somnolence Selected: serious skin reactions/hypersensitivity (DRESS), behavioral changes, suicidal thoughts + + History of drug abuse, severe liver or kidney dysfunction, pregnancy (data lacking) Phenobarbital R: focal-onset, generalized-onset (except absence), mono + add-on, any age R: absence, add-on, any age p.o. + i.v. Dizziness, ataxia, somnolence, nausea, vomiting, headache, visual impairment, nystagmus, diplopia Selected: serious skin reactions/hypersensitivity (SJS, TEN, DRESS), blood dyscrasia, osteoporosis, osteomalacia, kidney disease, hepatic encephalopathy, addiction, behavioral/cognitive changes, suicidal thoughts, connective tissue disorders + + + Older age, alcoholism, kidney, liver and lung disease, depression, history of drug abuse, pregnancy (teratogen) Contra-indications: hypersensitivity to barbiturates, porphyria, (severe) respiratory insufficiency, severe liver or kidney dysfunction Phenytoin R: focal-onset, generalized-onset [GTCS], second-line mono + add-on, any age Never for absence p.o. ≥ 1/10: gingival hyperplasia or hypertrophy, somnolence, ataxia, fatigue, diplopia, nystagmus, dysarthria Selected: serious skin reactions/hypersensitivity (SJS, TEN, DRESS), SLE, hepatotoxicity, lymphadenopathy, osteoporosis, absences, myoclonic seizures, suicidal thoughts, cerebellar atrophy, peripheral polyneuropathy, AV block + + + Liver and kidney disease, mixed seizures, pregnancy (teratogen) Contra-indications: blood dyscrasia, sinus bradycardia, sinoatrial block, 2nd and 3rd degree AV block, heart failure, Adams-Stokes syndrome, history of hypersensitivity to aromatic anticonvulsants, acute intermittent porphyria Pregabalin R: focal-onset, add-on, age ≥ 18 y p.o. ≥ 1/10: dizziness, somnolence, headache Selected: hypersensitivity (angio-edema), blurred vision, kidney failure, congestive heart failure, suicidal thoughts, constipation, addiction, encephalopathy 0 Older age, diabetes, heart disease, kidney dysfunction, history of drug abuse Primidone R: focal-onset, generalized-onset [e.g., GTCS, myoclonic, atonic], mono + add-on, any age R: absence, add-on, any age p.o. Dizziness, ataxia, somnolence, nausea, visual impairment, nystagmus Selected: serious skin reactions/hypersensitivity (SJS, TEN), addiction, suicidal thoughts, osteoporosis, osteomalacia, megaloblastic anemia + + + Older age, children, liver, kidney or respiratory impairment, history of drug abuse, mixed seizures, pregnancy (teratogen) Contra-indications: acute intermittent porphyria, hypersensitivity to phenobarbital Rufinamide R: Lennox-Gastaut (if clinical and EEG-based diagnosis and failure ≥ 2 AEDs incl. Neurology 91:82-90. Article PubMed Google Scholar 17.Scottish Intercollegiate Guidelines Network (2003) SIGN 70: Diagnosis and management of epilepsy in adults. Article PubMed Google Scholar 42.Zhu LN, Chen D, Xu D, Tan G, Wang HJ, Liu L (2017) Newer antiepileptic drugs compared to levetiracetam as adjunctive treatments for uncontrolled focal epilepsy: an indirect comparison. Expert Rev Neurother 17:381-392. 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Epilepsy centers provide a comprehensive team approach to the diagnosis and treatment of epilepsy. A patient-oriented team will typically include epileptologists (neurologists with expertise in treating seizures), neurosurgeons, neuropsychologists, nurse specialists, EEG technologists, social workers, and others with training and experience in epilepsy care. Epilepsy centers provide a comprehensive team approach to the diagnosis and treatment of epilepsy. A patient-oriented team will typically include epileptologists (neurologists with expertise in treating seizures), neurosurgeons, neuropsychologists, nurse specialists, EEG technologists, social workers, and others with training and experience in epilepsy care. 1 天前 · Refractory epilepsy displays three similar categories. An incorrect diagnosis of epilepsy, going to the wrong house, is more common than most people might think. One chart review study by Smith and colleagues in England found that 13% of patients referred for refractory epilepsy did not have epilepsy. 2022-1-11 · The International League Against Epilepsy (ILAE) has proposed the following definition of drug resistant epilepsy and suggests that this term be used instead of the term "refractory epilepsy." Drug-resistant epilepsy occurs when a person has failed to become (and stay) seizure free with adequate trials of two antiseizure medications (called ASMs). 2012-1-11 · The guideline covers diagnosing, treating and managing epilepsy and seizures in children, young people and adults in primary and secondary care. It offers best practice advice on managing epilepsy to improve health outcomes so that people with epilepsy can fully participate in daily life. ... How we develop NICE guidelines. This guideline ... 1 天前 · Refractory epilepsy displays three similar categories. An incorrect diagnosis of epilepsy, going to the wrong house, is more common than most people might think. One chart review study by Smith and colleagues in England found that 13% of patients referred for refractory epilepsy did not have epilepsy. 2012-1-11 · 1.4.6 It is recommended that all children and young people who have had a first non-febrile seizure should be seen as soon as possible by a specialist in the management of the epilepsies to ensure precise and early diagnosis and initiation of therapy as appropriate to their needs. (The Guideline Development Group considered that with a recent onset suspected ... 2012-1-11 · The guideline covers diagnosing, treating and managing epilepsy and seizures in children, young people and adults in primary and secondary care. It offers best practice advice on managing epilepsy to improve health outcomes so that people with epilepsy can fully participate in daily life. ... How we develop NICE guidelines. This guideline ... 2022-1-15 · An epilepsy syndrome is defined by a group of features usually occurring together. The features in a syndrome may include types of seizures commonly seen, age when seizures commonly begin, part of the brain involved, usual course, genetic information, and much more. 2012-1-11 · Guidance. The following guidance is based on the best available evidence. The full guideline gives details of the methods and the evidence used to develop the guidance.. In this guideline, the term 'adults' is used to describe people who are aged 18 years and older, and 'children' those who are aged 28 days to 11 years.

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