STANDARD TREATMENT WORKFLOW (STW)

Epilepsy

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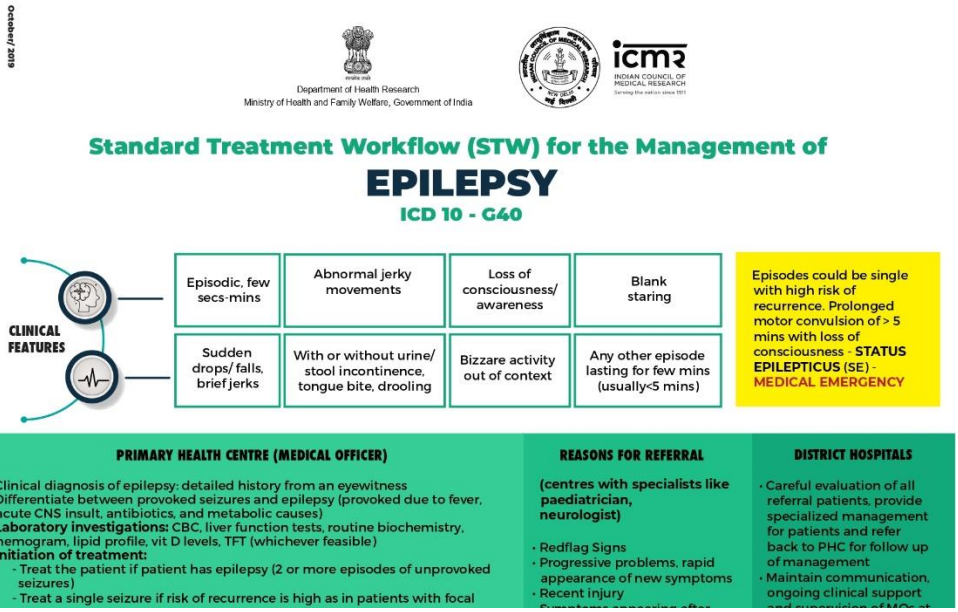
CITATION

Pandiyan J, Tripathi M, Gupta S, Gulati S, Sylaja PN, Nambiar V, Goyal K, Misra PK, Sreedharan SE. Epilepsy. Journal of the Epidemiology Foundation of India. 2024;2(1Suppl):S195-S196.

DOI: https://doi.org/10.56450/JEFI.2024.v2i1Suppl.098




october/ 2019
Department of Health Research
Ministry of Health and Family Welfare, Government of India
icmr
INDIAN COUNCIL OF MEDICAL RESEARCH
Standard Treatment Workflow (STW) for the Management of
EPILEPSY
ICD 10 - G40
CLINICAL FEATURES
Episodic, few secs-mins
Abnormal jerky movements
Loss of consciousness/ awareness
Blank staring
Sudden drops/ falls, brief jerks
With or without urine/ stool incontinence, tongue bite, drooling
Bizzare activity out of context
Any other episode lasting for few mins (usually<5 mins)
Episodes could be single with high risk of recurrence. Prolonged motor convulsion of > 5 mins with loss of consciousness - STATUS EPILEPTICUS (SE) - MEDICAL EMERGENCY
PRIMARY HEALTH CENTRE (MEDICAL OFFICER)
• Clinical diagnosis of epilepsy: detailed history from an eyewitness
• Differentiate between provoked seizures and epilepsy (provoked due to fever, acute CNS insult, antibiotics, and metabolic causes)
• Laboratory investigations: CBC, liver function tests, routine biochemistry, hemogram, lipid profile, vit D levels, TFT (whichever feasible)
• Initiation of treatment:
- Treat the patient if patient has epilepsy (2 or more episodes of unprovoked seizures)
- Treat a single seizure if risk of recurrence is high as in patients with focal seizures,mentally retarded, neurological deficits having family history of seizures abnormalEEG, neuroimaging
- Anti Epileptic Drug (AED broad spectrum, low dose, start low go slow, except status epilepticus)
- Emergency medical care of status epilepticus
• Treatment counselling: side effects/toxicities of drugs, red flags, importance of adherence, maintaining treatment diary
• Advice on prevention of seizures: regular medication, sleep 7-8 hrs, avoid excess TV/mobile/ photic stimulation, regular diet, lifestyle choices(avoid alcohol)
• Evaluate any possibility of superimposed non-epileptic seizure
• Training of MLP/ANM/ASHA on epilepsy
• For excessive alcohol use, refer to ANM/MLP where psychosocial interventions are carried out for substance use disorders
• Follow up visits for treatment monitoring & difficult patients under neurologist at STC centre
• Basic management of co-morbidities (behaviour, cognition, reproductive health, bone health)
• Alert to signs of abuse and neglect
• Maintain upward referrals with paediatrician/physician at DH
REASONS FOR REFERRAL
(centres with specialists like paediatrician, neurologist)
• Redflag Signs
• Progressive problems, rapid appearance of new symptoms
• Recent injury
• Symptoms appearing after alcohol binge
• Status epilepticus after stabilization
• Non response to adequate dose and duration of medication
• Serious side effects
• Neuroimaging
RED FLAG SIGNS
• Fever
• Headache
• Vomiting
• Altered Sensorium
• Severe Giddiness
• Loss of function of body
DISTRICT HOSPITALS
• Careful evaluation of all referral patients, provide specialized management for patients and refer back to PHC for follow up of management
• Maintain communication, ongoing clinical support and supervision of MOs at PHC
• Laboratory investigation
- CBC, liver function tests, antiepileptic drug levels, routine biochemistry, hemogram, lipid profile, vit D levels, TFT, CT brain (when necesary)
• Monitor side effects of AED
• Clinical Psychologist: counselling health services for persons with epilepsy or upon referral from PHC/UPHC
AED– BROAD SPECTRUM (GENERALIZED SEIZURES)
DOSE (MAINTENANCE: MG/D)
ADVERSE EFFECTS
Sodium Valproate (avoid in women of child bearing age unless non responsive to other drugs)
Starting dose :200mg TDS
Maintenance Dose: 600-2400
Anorexia, wt gain, nausea, vomiting, tremors, hair loss, PCOS, thrombocytopenia
Lamotrigine
Starting dose: 25mg HS (Lower dose with VPA)
Maintenance Dose: 100-300
Sedation, ataxia, dizziness, skin rash, SJS (lower risk with slow titration)
Levetiracetam
Starting dose: 250mg BD
Maintenance Dose: 1000-3000
Somnolence, dizziness, cognitive slowing, psychosis
Topiramate
Starting dose: 25mg OD
Maintenance Dose: 100-400
Sedation, somnolence, cognitive problems, weight loss, word finding difficulty, renal stones, seizure worsening
AED (focal seizures)
Carbamazepine
Starting dose: 100mg BD
Maintenance dose: 400-1200
Sedation, dizziness, ataxia, skin rash, SJS, hyponatremia, seizure worsening in some situations
Oxcarbazepine
Starting dose: 150mg BD
Maintenance dose: 600 to 1800
Sedation, dizziness, ataxia, headache, hyponateremia, skin rash
Phenobarbitone
Can be used for generalized also
Starting dose: 30mg HS
Maintenance dose: 60-180
Sedation, ataxia, depression, memory problems, hyperactivity in children, skin rash
Phenytoin
Starting dose: 200mg HS
Maintenance dose:200-400
Ataxia, sedation, gum hyperplasia, coarsening of facial features, hirsutism, memory problems, osteomalacia & bone loss, skin rash
Folic Acid 5 mg/day to be added along with AEDs in all women of child bearing age. Polytherapy and valproate to be avoided in women with epilepsy
IMPENDING SE
ESTABLISHED SE
REFRACTORY SE
5 MIN
30 MIN
60 MIN 2 IV drugs fail (Benzo + IV AED)
FIRST ABCS TO BE DONE FROM WHEN YOU SEE PATIENT SIMULTANEOUSLY WITH MEDICATION
Out of Hospital/home : Buccal/Intranasal IMDZ with acute repititive seizures/status (0.3-0.5 mg/kg)
EMERGENCY ROOM
IV Lorazepam up to 0.1 mg/kg @ 2mg/min
OR
IV Midazolam 0.1-0.2 mg/kg bolus or 0.05-0.5 mg/kg/hr in CIV
OR
IV Diazepam upto 0.25-0.4 mg/kg over 2-3 min
. Phenytoin @50 mg/min 20 mg/kg repeat plus 10 mg/kg if seizures do not stop in 15-20 min
. If seizures not controlled or contra indiction (CI) to PHT Intravenous Valproate 25-40 mg/kg @3-6 mg/kg/min
. If CI to above two; Phenobarbitone 20 mg/kg IV @ less than 5-60 mg/min but be prepared to Intubate and ventilate
Levetiracetam 20-30 mg/kg IV at 5 mg/kg/min (max 3g) or
Levetiracetam 1500-3000 mg via NGT or
Lacosamide 200-400 mg IV at 40-80 mg/min
Topiramate 150-800 mg bid via NGT
ICU
IV Midazolam loading 0.2 mg/kg
OR CIV 0.05-0.5 mg/kg/hr
(can go up to 2 mg/kg/hr)
Taper gradually after seizure stops
(preferably as evidenced by EEG)
Thiopental 5-7 mg/kg IV bolus
further 50 mg until seizures controlled
3-5 mg/kg/hr for only 48 hours
OR Propofol IV loading 2-5 mg/kg
CIV 1-15 MG/KG/HR
OR Pentobarbital IV upto 10 mg/kg
@ <0.2-0.4 mg/kg/min CIV 0.5-2 mg/kg/h
OR Ketamine bolus 1.5 mg/kg
CIV 0.01-0.05 mg/kg/h max 10mg/kg/hr * to be EEG Monitoring
Super refractory > 24hr no control
Airway, blood pressure, temperature, intravenous access, electrocardiography, CBC, glucose, electrolytes, AED levels, ABG, oximetry, tox screen, central line
If alcoholic- thiamine & glucose, if diabetic GLUCOTEST/blood sugar & glucose IV. MUST INFORM CONSULTANT ON CALL
KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES
This STW has been prepared by national experts of India with feasibility considerations for various levels of healthcare system in the country. These broad guidelines are advisory, and are based on expert opinions and available scientific evidence. There may be variations in the management of an individual patient based on his/her specific condition, as decided by the treating physician. There will be no indemnity for direct or indirect consequences. Kindly visit our web portal (stw.icmr.org.in) for more information.
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