

## **Clinical Pathways for the Management of Adults with Epilepsy in Hull and the East Riding of Yorkshire**

Patients with suspected Epilepsy should be referred to a specialist in Epilepsy and seen within 2 weeks of referral. Should the diagnosis of Epilepsy be suspected on clinical parameters, the patient should be referred for special investigations which include brain imaging, (ideally MRI scan) especially if semiology of seizure type indicates focal seizures, electroencephalography (EEG) and electrocardiography (ECG). Investigations should ideally be completed within a 4-8 week window.

When the diagnosis seems secure (this might be after the first clinical consultation), patients and their carers should be given general counselling and information about Epilepsy and its management, seizure triggers and driving. Issues including first aid, injury prevention, benefits, insurance, status epilepticus, sudden death in Epilepsy (SUDEP), employment, lifestyle, family planning, pregnancy as well as support groups should be discussed at the first or next visit (with specialist nurse in newly diagnosed clinic). All patients should have access to a specialist epilepsy nurse who will be involved in the education, support, counselling and management of the patient with epilepsy. The specialist nurses must have open access to the medical epilepsy specialists, to whom they are responsible, to discuss all management issues.

Once a diagnosis of Epilepsy is made, recommendations will be made to the patient's general practitioner about the initiation of medication and titration. Regular monitoring of the patient will then be required by both primary and secondary care, the frequency being dependent on the success and tolerance of the medications. Every person with epilepsy should have a comprehensive care plan. When patients are deemed to be stable or well controlled, they should be discharged back to the care of their general practitioners. Should new problems arise with regards the epilepsy, patients could be referred back to the Epilepsy specialist. Even when patients are stable and controlled, they need to have at least an annual review by their general practitioners concerning their epilepsy.

There should be provision of some additional specific epilepsy services e.g. patients with learning disabilities and epilepsy, pregnancy and epilepsy, vagal nerve stimulator monitoring clinics.

### **Specific management of Epilepsy**

1. Medical management
2. Surgical treatment

#### **1. Medical Management.**

Treatment will typically initially be in the form of anti-epileptic drugs (AED's), Surgery may be indicated early in treatment in certain situations e.g. if there is a tumour.

Surgery may be considered later if there is a specific responsible lesion and drug treatment is not successful.

#### Drug selection and management.

Based on the clinical assessment, it should usually be possible to establish the seizure type – focal seizures versus generalised seizures or if there is a specific epilepsy syndrome e.g. juvenile myoclonic epilepsy. The selection of the appropriate drug to be prescribed will depend primarily on the seizure type, syndrome and then secondarily on the patient profile including, age, sex, potential pregnancy, possible side effects, concurrent medications and coexistent illnesses. The aim would always be to control seizures with monotherapy in the least effective dose to minimise potential drug side effects. Where combination therapy is prescribed, this should be “rational” - where drugs with different pharmacological effects are tried to have a more broad spectrum effect. On occasion additional drugs e.g. benzodiazepines can be prescribed on a “when required” basis, when the patient is likely to have an increased risk of seizures e.g. with stress, perimenstrually, peri-operatively or to halt clustering of seizures.

**Sodium Valproate should not be offered to women of child bearing potential unless other options are ineffective or not tolerated and the pregnancy prevention programme is in place. (see MHRA safety advice)**

#### Generalised tonic clonic seizures or Idiopathic generalised Epilepsy.

First line treatments to be considered include Sodium Valproate (in men), Levetiracetam and Lamotrigine. Second line treatment includes Topiramate, Zonisamide, Clobazam, Clonazepam

Other treatments include Ethosuximide (for typical absence seizures), Piracetam (for myoclonic seizures), Phenobarbital, Rufinamide (for Lennox Gastaut syndrome) and Stiripentol for Dravet Syndrome.

CBD (Cannabidiol) is licensed for use only in individuals with confirmed Lennox Gastaut and Dravet Syndromes and have intractable epilepsy (as per NICE TAs).

#### Focal seizures

First line treatments include Lamotrigine, Carbamazepine and Levetiracetam.

Second line treatments include Oxcarbazepine, Sodium Valproate, Topiramate, Clobazam, gabapentin (class C controlled substance)

Other treatments include Brivaracetam, Eslicarbazepine, Lacosamide, Perampanel, Phenobarbitone, Phenytoin, Pregabalin (class C controlled substance) and Zonisamide.

## **2. Surgical Treatments**

Surgical treatments include respective surgery and insertion of Vagal Nerve stimulator. There are various surgical procedures available for different indications – to remove an abnormal epileptiform focus or to prevent focal seizures from becoming generalised. These treatments are usually reserved for refractory Epilepsies - if there

is a high chance that surgery would be curative without the need for long term medications or would allow for significant reduction in use of AED's.

### **3. When required therapy**

Buccal Midazolam can be used in adults for acute management of prolonged seizures. It is available as prefilled syringes (10mg in 2ml). In adults the usual dose is 10mg repeated once more if no response.

Both clonazepam or clobazam tablets may be initiated as a short dose 3-14 days for multiple seizures to improve control.

(These pathways are based on NICE and SIGN guidance;)

#### **APPROVAL PROCESS**

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<b>Approved by:</b>	<i>MMIG</i>
<b>Ratified by:</b>	<i>Hull and East Riding Prescribing Committee September 2020</i>
<b>Review date:</b>	Sept 2023