
Mesial Temporal Lobe Epilepsy

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Abstract: Mesial temporal lobe epilepsy which is a characterized disorder which associates electro-clinical features suggestive of seizure onset in the mesial or limbic structures of the temporal lobe. A typical course of the disease can be retrospectively recognized, including early prolonged febrile seizures, a latest period, onset in mid-to-late children, may initially occur in isolation periods of seizure remission during adolescence or early adulthood. The diagnosis of MTLE is crucial because of its frequent poor prognosis under antiepileptic drugs, and of the possibility of excellent results after respective surgery. **Keywords: Mesial Temporal Lobe Epilepsy**

Introduction: {MTLE} is the most prevalent form of epilepsy and among the most refractory to medical treatment. Hippocampus is the usual pathological substrate, but other lesion in MTLE give rise to the same electro clinical syndrome. Although the etiology of hippocampus and natural history of mesial temporal lobe epilepsy are inadequately understood. Referral to a comprehensive epilepsy center is most important when seizures persists after a trail of first- line medication and interfere with daily living patients with mesial temporal lobe epilepsy often with excellent outcome with surgical treatment, with 70 to 90%. Becoming good results with respect to quality of life are obtained when surgical therapy is soon after failure of medications.

Case report: Mrs. Jayamma with the age of 29years female patient admitted in the Narayana Medical Hospital with the disease of mesial temporal lobe epilepsy.

Diagnostic evaluation: M.R.I- Left mesial temporal sclerosis with cortical dysplasia.

Video EEG - Spike and waves discharges present.

Medical management:

Treatment	Fre	Dose	Morning	Afternoon	Evening
Inj.piptaz	BD	4.5gms	1 inj	--	1 inj
Inj.metrogy	1TID	100ml	1 inj	1 inj	1 inj
Inj.ciplox	BD	100ml	1 inj	--	1 inj
Tab.Rantac	BD	150ml	1 tab	--	1 tab

➤ Febrile {hippocampal sclerosis} {11.5%}

Family history:

- Autosomal dominant inheritance
- Finding dominant two patients in one family
- 19 to 24% refractory seizures

Brain infection:

- Risk greatest in less than 4 year of age

Hippocampus mal formation:

- Dysplastic lesions e.g.: heterotopias



Clinical presentations:

Aura

90% cases

Most commonly:

- Epigastric sensation with a rising character

Less commonly:

- Fear, anxiety, dejavu, jamais, non specific sensation

Uncommonly:

- Olfactory and gustatory aura and amnesia.

Automatism:

- Picking
- Fumbling
- Gesticulating
- Rhythmic movements
- Head turning
- Eye blinking and
- Memory impairment

Diagnostic evaluations:

M.R.I: ❖ Left temporal lobe appears mildly atrophic with diffuse cortical thickening.

❖ There is reduced volume in Para hippocampus gyrus in left amygdale.

❖ There is mild prominence of temporal horn of left lateral ventricle.

❖ left mesial temporal sclerosis with cortical dysplasia.

VIDEO EEG –

❖ Spike and waves discharges are present in left temporal side.

MEG{magneto encephalography}:

❖ Few tiny T2 hyper intense foci noted in periventricular region of bilateral parietal and right frontal lobes due to previous hypoxic insult.

Video EEG – spike and waves discharges present.

Treatment

Surgical management:

{**Selective Amygdalo Hippampectomy**}

It is a surgical procedure for the treatment of epilepsy.

It consists of the removal of the hippocampus, which has a role in memory spatial awareness, and navigation, and the amygdale, which have a role in the processing and memory of emotional reactions, both structures forming part of limbic system of the brain.

Surgical anatomy: The temporal lobe comprises three heterogeneous cortices: a six layered neocortex (with superior, middle, inferior, and transverse temporal and fusiform gyri).

Procedure: Performing a standard anterior temporal lobectomy consists of resecting the lateral temporal and mesial temporal structures allows better visualization of the medial structures, allowing en bloc removal of the hippocampus. The procedure is usually performed with the patient in the supine position. Elevating the ipsilateral shoulder with and rotating the head to the contra lateral side. The head is tilted slightly to place the zygoma at an approximately 10 degree angle from the horizontal plane of the surgical floor. To avoid injury to the frontalis branch of the facial nerve, the incision 1 cm above the zygoma and 1 cm anterior to the tragus. The superficial temporal artery is dissected and preserved if possible. A subperiosteal dissection is used to remove the muscle from the bone. a craniotomy performed on small portion of the frontal bone posterior to the pterion.

If failed

- Reoperation considered after 2 years
- 1/3rd -2/3rd reoperation result in seizure freedom.

Side effects

- Visual fields loss
- Cognitive changes
- Verbal memory loss-44%
- Reducing naming-34



Nursing diagnosis:

Ineffective airway clearance related to increased secretion of saliva as evidenced by observation

Interventions:

- Position person to optimize respirations, head to bed elevated 30-45 degrees.
- Auscultate breath sounds every 1 to 4 hours.
- Monitor blood gas values and pulse oxygen saturation levels as available.

Ineffective self health management related to life style adjustments as evidenced by observation

Intervention:

- Educate lifestyle changes like avoidance of alcoholism and smoking.
- Discuss therapy options and describe rationale, so patients and family can make life styles modifications to manage a chronic disease.

Disturbed sensory perception related to poor visual activity as evidenced by unable to recognize the persons.

Intervention:

- Assess the patient ability to see and perform activities.
- Encourage patient to see ophthalmologist at least yearly.
- Provide sufficient lightening for patient to carry out activities.
- Provide night light for patient's room and ensure lighting is adequate for patients needs.

Risk for injury related to loss of consciousness during seizure activity as evidenced by motor progression

Interventions:

- Remove potentially harmful objects from the environment.
- Use padded side rails to prevent injury during a seizure.
- Guide movements to prevent injury during a seizure.
- Monitor neurological status to identify any deficits resulting from seizure.

Risk for infection related to surgical incision as evidenced by poor hygienic practices

- Maintain strict aseptic techniques, do wash your hands frequently.
- Supervise and report complications immediately.
- Explain the recommended position.
- Instruct the patient to know bed rest activity restrictions, with flexibility to the bathroom, according to a gradual increase in activity tolerance.

Conclusions: Mesial temporal lobe epilepsy was most common identifiable cause of seizure in our study of the six feature described in cases of mesial temporal lobe epilepsy on MRI, increased hippocampal signal intensity is the most consistent. Temporal lobe epilepsy protocol increases the sentivity and specificity of the diagnosis compared to routine MRI, brain study.

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