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Evaluation of the first sizure

The initial evaluation:

- Assesment of adequacy of the airway,ventilation,cardiac function
- Check of temperature,BP,BS

Search for life-threatening causes:

- Meningitis
- Sepsis
- Poisening
- trauma

The subsequent step:

Focal onset or generalized seizure?

Focal seiures:

Forceful turning of the head and eyes to one side,unilateral movement,sensory disturbance,area

- Focal seizure in a adolescent or adult indicate a localized lesion
- Focal seizures in childhood are secondary to a lesion or genetic epilepsy
- Focal seizures in neonate are secondary to focal lesion such as perinatal stroke or metabolic abnormality such as hypocalcemia

Motor seizures:

Tonic-clonic,tonic_clonic,myoclonic,atonic

Tonic seizures:

Increased tone or rigidity

Lasting 2 sec up to several minutes

Atonic seizures:

Flaccidity and lack movement

Clonic seizures:

Rhythmic fast muscle contractions and relaxations

Myoclonus:

Shock-like muscle contractions

Aura:

Visual(flashing lights,seeing color,complex visual hallucinations)

Somatosensory(tingling)

Olfactory

Vestibular ,

Experiential(deja vu,deja vecu feeling)

Sensations depending on the precise localization of the origin of the sezures

The most common aura experienced by children consists of epigastric discomfort or pain and a feeling of fear

The posture of the patient,presence or absence and distribution of cyanosis,vocalizations,loss of sphincter control and postictal state(including sleep,headache and hemiparesis) should be noted.

Personality changes or symtoms of increased ICP can suggest an intracranial tumor

Cognitive regression can suggest an degenerative or metabolic disease

History of prenatal or perinatal distress or developmental delaly can suggest congenital or perinatal brain dysfunction

Acute or subacute personality changes,psychiatric symptoms and/or associated movement abnormalities may suggest an autoimmune etiology

Examination:

Head circumference,length,weight measurements and compare with previous measurements

Acareful general and neurologic examination

Funduscopic exam:

Papill edema,optic neuritis,retinal hemorrhages,uveitis,chorior etinitis,coloboma,macular changes and retinal phakoma

Unusual facial features or hepatosplenomegaly may point to an storage disease or inborn error of metabolism

Skin:

Ash leaf,adenoma sebaceum,

Shagreen patches ,retinal phakomas are infavor TS

Multiple cafe-au-lait spots(NF)

Nevus flammeus(storage-weber syndrome)

Localizing neurologic signs:

Hemiparesis,hyperreflexia,positive Babinski sign and positive

Pronator drifting might suggest a contralateral hemispheric structural lesion such as a slow-growing glioma

Unilateral growth arrest of the thumb nail,hand or extremity in a child with focal seizure suggests a chronic condition such as porencephalic cyst,A.V malformation or cortical atrophy of opposite hemisphere

Lab.testing:

Case-by-case basis

Cbc diff.,electrolytes,urine

Toxicology test

ECG:

To rule out long QT interval Syndrome or other cardiac dyshythmias

L.p:

Limited value in acute work up of a nonfebrile sezure

Indication:

1-concerning for an infectious or inflammatory process

2-clinical concern for intracranial bleeding despite normal brain imaging

EEG:

Should be performed in all cases of a first unprovoked nonfebrile seizure

Brain imaging:

Indication:

1-focal seizure

2-focal deficits in exam.

3-if the patient s status is not returning to baseline

4-trauma preceding seizure

5-high-risk medical history


Thanks for attention