CONDITIONS THAT MIMIC SEIZURE

Pegah Katibeh

Pediatric neurologist

Shiraz University of Medical Sciences

Table 612.1 Conditions That Mimic Seizures According to Age of Presentation

AGE	SYNCOPE AND OTHER GENERALIZED PAROXYSMS	MOVEMENT DISORDERS AND OTHER ABNORMAL MOVEMENTS	OCULOMOTOR AND VISUAL ABNORMALITIES	SLEEP DISORDERS
Neonate	Apnea Paroxysmal extreme pain disorder	Jitteriness, tremor, increased startle reflex, hiccups Hyperekplexia, paroxysmal dystonic choreoathetosis	Paroxysmal tonic upgaze Alternating hemiplegia of childhood, staring, daydreaming, and time-out "unresponsiveness"	Benign neonatal sleep myoclonus Sleep transition disorders, REM
Infants	Reflex anoxic seizures Breath-holding spells Benign paroxysmal vertigo Paroxysmal extreme pain disorder	Jitteriness Sandifer syndrome Paroxysmal dystonic choreoathetosis Benign myoclonus of early infancy Pathologic startle Shuddering attacks, infantile head atonic attacks Benign paroxysmal torticollis Psychological disorders Alternating hemiplegia of childhood Jactatio capitis (head banging) Drug reactions	Paroxysmal tonic upgaze Oculomotor apraxia Spasmus nutans Opsoclonus–myoclonus syndrome, staring, daydreaming, and time-out "unresponsiveness"	Non-REM partial arousal disorders REM sleep disorders Narcolepsy Sleep transition disorders (somnambulism, somniloquy)
Children and adolescents	Benign paroxysmal vertigo Compulsive Valsalva-like maneuver Familial hemiplegic migraine Syncope (long QT, vasovagal, vagovagal, orthostatic, migraine-induced) Psychogenic seizures Transient global amnesia Hyperventilation spells, factitious disorder	Tics Tremor Pathologic startle Paroxysmal dyskinesias Alternating hemiplegia of childhood Benign paroxysmal torticollis Episodic ataxia Psychological disorders, including factitious disorder imposed on another, malingering Masturbation Psychogenic seizures Cataplexy Jactatio capitis (head banging) Episodic rage, drug reactions, factitious disorder	Staring, daydreaming, and time-out "unresponsiveness" Drug reactions, hallucinations, visual snow Conversion reactions, factitious disorder	Non-REM partial arousal disorders REM sleep disorders Narcolepsy Sleep transition disorders (somnambulism, somniloquy) Sleep myoclonus Restless legs syndrome, conversion reactions, factitious disorder

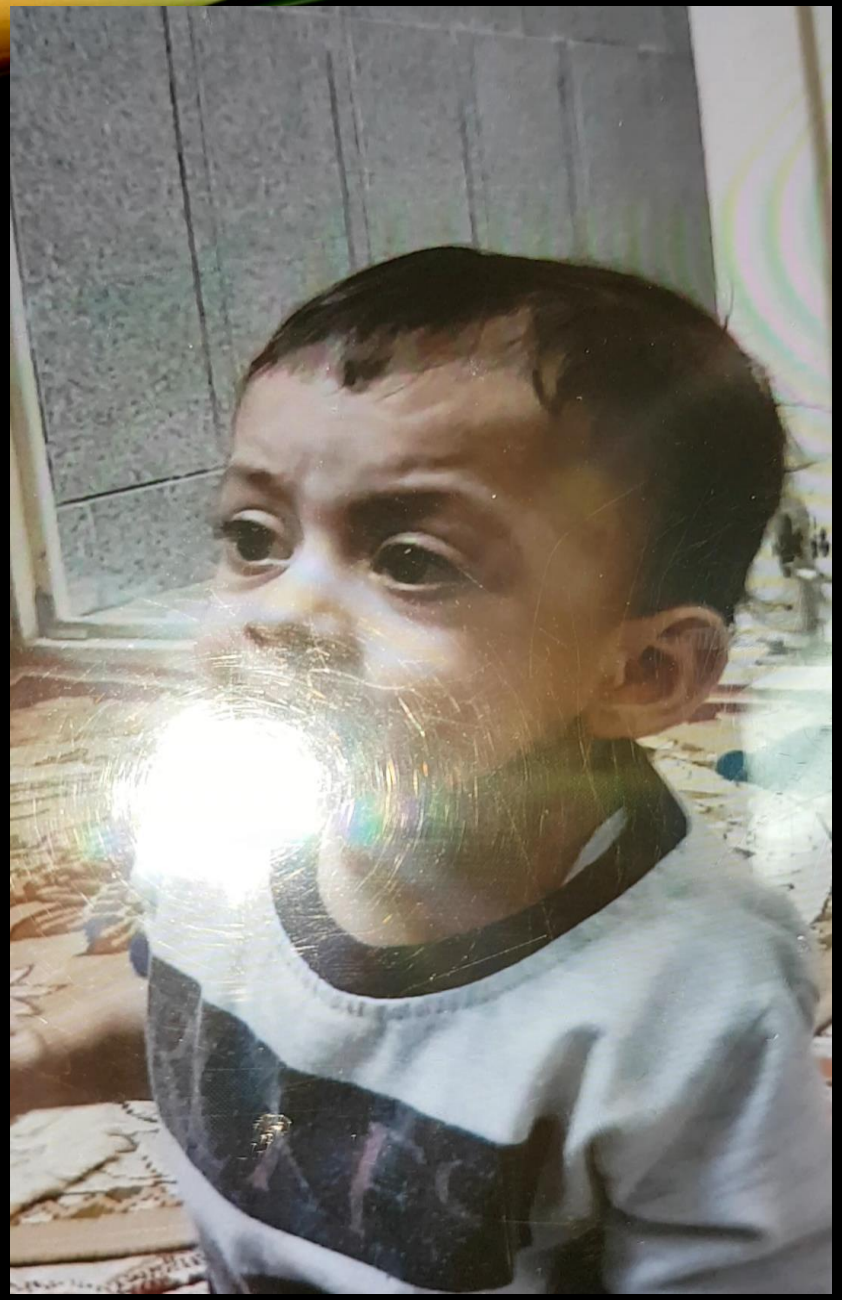
در ویدیوی زیر که باعث نگرانی شدید مادر این نوزاد شده است چه میبینید؟ جهت درمان چه باید کرد؟

NEONATAL SLEEP MYOCLONUS

- repetitive, usually bilateral, rhythmic jerks involving the upper and lower limbs during non-rapid eye movement sleep,
- sometimes mimicking clonic seizures.
- Although not stimulus sensitive, a slow (1-Hz) rocking of the infant

in a head-to-toe direction is a specific diagnostic test that may sometimes reproduce the neonatal sleep myoclonus.

- The lack of autonomic changes,occurrence only in sleep, and suppression by awakenings may help in differentiating these events from epileptic seizures.
- Remission is spontaneous,usually at 2-3 mo of age.
- In older children and adults, sleep myoclonus consists of random myoclonic jerks of the limbs.



SHUDDERING ATTACKS

- characterized by rapid tremors of the head, shoulder, and trunk, lasting a few seconds,
- often associated with eating, and recurring many times a day.
- Others have considered shuddering as an early manifestation of essential tremor because a family history of essential tremor is often present.

مادر این کودک ۳ساله با شکایت از حرکات غیر طبیعی به شکل زیر وی را نزد شما آورده است جهت تشخیص و تایید آن چه می کنید؟

SPASMUS NUTANS

- Triad of nystagmus, head tilt, and head nodding.
- If diurnal fluctuation occurs, symptoms may look like those of epileptic seizures.
- A brain MRI should be performed because the triad has been associated with masses in the optic chiasm and third ventricle.
- Retinal disease should also be ruled out.
- In the absence of these associations, remission occurs before 5 yr of age.

HEAD NODDING

- without accompanying nystagmus
- in older infants and toddlers.
- can be lateral (“no-no”), vertical (“yes-yes”), or oblique.
- may occur several times per day with frequency (1–2 Hz)
- Do not occur when lying down, but can occur in the sitting or standing position.
- Older children describe an inability to suppress the movement
- typically resolve within months, but can persist longer.
- Some have a prior history of shuddering spell

BREATH-HOLDING SPELLS

- a misnomer, because they are not necessarily self-induced
- result from the immaturity of the autonomic system
- two different forms:
- **pallid breath-holding spell,** caused by reflex vagal-cardiac bradycardia and asystole.
- The second type is the **cyanotic,** or **blue, breath-holding spell,**
- which does not occur during inspiration but results from prolonged expiratory apnea and intrapulmonary shunting
- Episodes usually start with a cry (often, in the case of the pallid type, a silent cry with marked pallor)
- progress to apnea and cyanosis.
- Spells usually begin between 6 and 18 mo of age.
- Syncope, tonic posturing, and even reflex anoxic seizures may follow severe episodes,

BREATH HOLDING SPELL

- Injury (such as even a minor bump on the head), pain, and frustration, particularly with surprise, are common triggers.
- There usually is a family history of vasovagal syncope or breath-holding spells.
- Education and reassurance of the parents is usually all that is needed
- as a rule, self-limited and are outgrown within a few years.
- screening for anemia and for arrhythmia with an electrocardiogram
- can rarely be the presenting sign of long-QT syndromes.
- Anticholinergic drugs (e.g., atropine sulfate 0.03 mg/kg/day, in 2-3 divided doses with a maximum daily dose of 1.2 mg),

BREATH HOLDING SPELL

- Antiseizure (levetiracetam) drug therapy for coexisting anoxic seizures that are recurrent, prolonged, and not responding
- educate parents to handle more severe spells with first-aid measures or even basic cardiopulmonary resuscitation
- Extremely severe episodes resulting in marked bradycardia and asystole have been reported to respond to a cardiac pacemaker.
- All parents should be taught not to provide secondary gain
- preparation for unpleasant experiences (such as receiving a shot) rather than surprising the child.


LOVE

MASTURBATION

- A normal behavior, occurs at all ages and has even in utero,
- most common at about age 4 and adolescence;
- it occurs in 90% to 94% of males and 50% to 60% of females
- Frequency and duration are variable.
- Masturbation in young children; unusual postures or movements
- which may be mistaken for abdominal pain or seizure.
- direct genital manipulation in boys
- In girls, adduction and rubbing together of the thighs, sitting on
- asymmetrical or lower limb scissoring.
- posturing of the limbs, mistaken for paroxysmal dystonia.

MASTURBATION

Several characteristic features of masturbating girls :

(1) onset after 2 months of age and before 3 years of age;
(2) stereotype posturing with pressure applied to the pubic are;
(3) quiet grunting, diaphoresis, or facial flushing;
(4) episode duration of less than a minute to several hours;
(5) no alteration of consciousness;
(6) normal findings on examination;
(7) cessation with distraction or engagement of the child in another activity.

MASTURBATION

- No imaging or laboratory evaluation is required
- the neurologic and physical examinations are normal
- no expectation that this behavior will cease as the child grows older.
- However, the frequency of the behavior usually decreases
- as the child gets older, and the behavior is less likely to occur under the observation of the parents.
- Neurologic and developmental outcomes are normal.
- There is no need for treatment


JUN 17 2003

BENIGN PAROXYSMAL TORTICOLLIS

- an episodic disorder in the first year of life.
- a head tilt to one side for a few hours or days.
- Spells can last as little as 10 minutes or as long as 2 months, but this is uncommon.
- accompanied by pallor, vomiting, irritability, or ataxia.
- No trigger for the events, recur with some regularity,
- Up to twice a month then become less frequent as the child grows older.
- abates spontaneously, usually by 2 to 3 years , always by age 5.
- The child is normal between events.
- Interictal and ictal EEGs are normal.
- No treatment has been shown to be effective.

BENIGN PAROXYSMAL TORTICOLLIS

a migraine variant.
There is often a family history of migraine.
Some older children complain of headache during a spell, and many children go on to develop typical migraine after they have "outgrown" the paroxysmal torticollis.
Children may develop other migraine variants, such as benign paroxysmal vertigo and cyclic vomiting.

DDX OF TORTICOLLIS

- acute dystonic reaction to medication,
- posterior fossa or cervical cord lesion,
- cervical vertebral abnormalities, Klippel–Feil syndrome.
- posterior fossa abnormalities , including Chiari syndrome or a mass.
- In structural lesion, torticollis tends to be persistent and not paroxysmal.
- Torticollis can also be a sign of sixth-nerve palsy.
- Congenital muscular torticollis ;present from birth, nonparoxysmal, and is associated with palpable tightness or fibrosis of the SCM unilaterally.

Thanks