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Case Report

The Dilemma of Seizure VS Pseudoseizure

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Background

Seizures are abnormal CNS function presumably caused by "Seizure" discharges from cerebral neurones. Pseudo seizures are episodic abnormal behaviour , which are determined motivationally.In many circumstances the distinction is subtle and may be difficult. Since prognosis treatment and disposal of such cases is different the initial medical investigation, usually by the family physician, plays a pivotal role. He or she must be well versed with the distinctive features of pseudo seizures. Salient features of pseudo seizures are described which may be useful in evaluation.

Pseudo seizures are of two types [1]. When the motivation for abnormal behaviour is conscious and purposeful they are called malingering and when the pseudo seizures are motivated subconsciously the condition is psychogenic caused by failure of ego-coping mechanisms.

Manifestation of pseudo seizures

The most common manifestation of pseudo seizures is motor. There is motor posturing, tremulousness, violent bizarre shaking, jerking, kicking, grimacing, thrusting and rhythmic coordinated movement. Tonic posturing may closely mimic epileptic activity and may be bilateral. In all these movements careful observation would reveal that the patient observes the environment and interacts with it, however , responses to verbal stimuli may be impaired. The individual may have non-specific complaints and show semi purposeful activity. Hyperventilation or breath holding may be present, verbalisation suggesting distress may be reported. Discrete and meticulous note should be made of the setting, which is neutral in case of seizures, where as it is emotionally charged in pseudo seizures. Stereotypy is the hallmark of epileptic attacks whereas pseudo seizure vary with every attack. Seizures appear and disappear slowly and leave the patient dazed for some time whereas after a pseudo seizure the individual is alert and absolutely normal in sometime. Pseudo seizures never occur in sleep and usually result in no injury or cause incontinence of urine and stool. Secondary gains are usually evident in pseudo seizures but may need detailed history taking for elicitation. In contrast to the bizarre presentation of pseudoseizures the clinical picture of seizures follows a distinctive pattern depending upon the type of seizure.

Laboratory studies that may help are routine metabolic profile. Drug and toxic profile may unravel unknown disorders. Psychiatric and neurologic examination are mandatory. CT scan of the head would help in detection of a structural lesion. Videotelemetry and simultaneous EEG monitoring would help in definitive way but is available only in afewcentres in our country. In its absence, repeated and sleep EEG during an attack or soon after it, would rule out seizure disorder. Seizure disorders traversing the limbic structures in the brain cause a rise in serum prolactin and cortisol . This does not happen in case of motor manifestation of pseudo seizures. Levels of prolactin and cortisol estimated soon after a seizure would show a rise [2].

Feature	Epilepsy	NES
Subjective seizure symptoms	Typically volunteered, discussed in detail	Avoided; discussed sparingly
Formulation work (e.g. formulation attempts)	Extensive, large amount of detail	Practically absent, very little detailing efforts
Seizures as a topic	Self-initiated	Initiated by interviewer
Focus on seizure description	Easy	Difficult or impossible ("focusing resistance")
Spontaneous reference to attempted seizure suppression	Often made	Rarely made
Seizure description by negation	Rarely (negation is usually explained and contextualized)	Common and absolute (e.g. "I feel nothing", "I do not know anything has happened")
Description of periods of reduced consciousness or self-control	Intensive formulation work	"Holistic" description of unconsciousness" "I know nothing"

Summary of the most important interactional, topical and linguistic differential diagnostic features [3].

Case report: 1

A 23 year old unmarried female presented to our hospital with complaints of jerky movements on the left side which generalized .She had previously consulted her family physician who made adiagnosis of psychogenic seizures. There was no up rolling of eyes,no tongue bite no postal ictal features. A MRI scan brain and EEG was done which showed normal study. A diagnosis of pseudoseizure was made . She was counselled but still she continued to have seizures. During a acute episode her serum cortisol and prolactin levels were checked and found to be elevated. She was given InjLacosamide 100mg bd and she responded to treatment. She was discharged on Tab lacosamide 50 mg bd.

Conclusion

So the inference from this case is psychogenic seizures should be with diagnosis of exclusion and the serum prolactin and serum cortisol levels should be evaluated in cases of seizure disorder.

Case report: 2

A 21 year old unmarried lady presented with complaints of jerky movements in both upper limbs with generalization. The jerky movements where accompanied with hyperventilation spells. She had some post-ictal confusion. She was being treated by psychiatrist for depression. She was advised a MRI Brain and EEG which were normal. A functional MRI brain was done which showed mildly decreased perfusion in left inferior frontal region on ASL. Mutual activations of bilateral insular cortex, right superior temporal cortex and activations of bilateral middle and inferior frontal cortices and left motor cortex with right insular and activations along bilateral thalami with left insular.This is a case of pseudo seizure where functional abnormality was demonstrated on FMRI Brain.

Conclusion

Psycogenic Non Epileptiform Seizures must be a diagnosis of exclusion. With this we conclude that organicityof PNES can be determined by radiological modalities like functional MRI. This is the borderline of Neurology and Psychiatry and a Neurologist has tocautious as these cases can be easily misdiagnosed.

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