

# Pseudo Todd's palsy in a patient with medically intractable epilepsy

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## Citation

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## Abstract

Patients with epilepsy may also have non-epileptic seizures (pseudo seizures). One study showed that 1 out of 5 people presenting to a comprehensive epilepsy center with the diagnosis of medically intractable epilepsy actually had non-epileptic events when monitored. It is particularly difficult to diagnose non-epileptic seizures in patients who also suffer from real epileptic seizures. Various non-epileptic clinical presentations have been reported in the literature. Patients may present with predominantly non-epileptic convulsions characterized by out of phase thrashing movements of the limbs, pelvic thrusting and side to side movements of the head. At other times the non-epileptic manifestations are predominantly psychiatric in character with patients exhibiting bizarre behavior, reporting vivid visual and somatosensory hallucinations or directed vocalizations. We present here a patient with medically intractable epilepsy who presented with dense hemiplegia and hemisensory loss after reported seizures at home. Patient was considered an ideal candidate for intravenous tissue plasminogen activator (tPA) therapy so an acute stroke up was initiated at the time of presentation to the ER. CT scan and MRI brain with DWI was negative for acute stroke. Neurological examination was suggestive of psychogenic weakness. Patient made a full recovery over a course of 2 days. Pseudoparalysis or pseudo Todd's palsy should be considered in the differential of a patient with epilepsy presenting with acute hemiplegia and other focal neurological deficits especially if they are young and lack traditional vascular risk factors for stroke.

## CASE REPORT

A-22-year-old woman with history of medically intractable focal epilepsy presented to the ER with acute left sided hemiplegia and hemisensory loss. Patient's seizures started at the age of 9 and despite trial with multiple anti-epileptic drugs, adequate seizure control could not be achieved. Two years before the current presentation a vagus nerve stimulator was implanted. A year prior to the current presentation she underwent a partial left temporal lobectomy. Following surgery she remained seizure free for 6 months after which she reported that her seizures had come back.

As per her mother, the night prior to her presentation to the hospital she went to bed at around 10 pm. At around 5 am she got up to go to the bathroom when she reported that she was having a seizure. Her mother noticed her to stiffen, no gross convulsive movements were described and there was no reported loss of consciousness. The patient though reported that she was unable to move her left arm or leg and did not feel anything on that side. She was rushed to the hospital and an acute stroke protocol was initiated on her

arrival in the ER. The other differential considered was Todd's palsy. Initial head CT was negative for hemorrhage or early signs of ischemic stroke. Her neurological examination was inconsistent with her deficits. There was no voluntary movement of the left arm or leg but she held her arm briefly when a pronator drift sign was attempted before letting go. The "paralyzed" arm held over the patient's face and dropped (drop test) did not strike her face. Hoover's sign was suggestive of non-organic paresis of left leg. Normal reflexes and muscle tone was present and plantar reflex was flexor. All sensory modalities (touch, pain, vibration and proprioception) disappeared at the midline unlike true sensory loss where boundaries overlap for different modalities. As her neurological examination was suggestive of a pseudo neurological syndrome, an urgent MRI brain was requested which showed no diffusion weighted abnormalities. Intravenous plasminogen activator therapy was withheld. Forty eight hours video EEG monitoring study revealed no evidence of ongoing seizures. Over a period of two days the patient made an uneventful full recovery.

## **DISCUSSION**

Non-epileptic seizures (pseudo seizures) are frequently documented in patients who also have real seizures<sup>1</sup>. Many drug resistant patients seen in comprehensive epilepsy centers suffer in fact from psychogenic non-epileptic seizures. Various non-epileptic clinical presentations have been reported in the literature. Patients may present with predominantly non-epileptic convulsions characterized by out of phase thrashing movements of the limbs, pelvic thrusting and side to side movements of the head. At other times the non-epileptic manifestations are predominantly psychiatric in character with patients exhibiting bizarre behavior, reporting vivid visual and somatosensory hallucinations or directed vocalizations.

Patients at times present with neurological symptoms and signs for which no identifiable structural or functional etiology is found in spite of extensive investigations. These are referred to as pseudo neurological syndromes and include pseudo paralysis, pseudo sensory syndromes, psychogenic movement disorders, pseudo disorders of consciousness (pseudo coma), gait disorders (hysterical gait), pseudo neuroophthalmologic syndromes and hysterical aphonia among others<sup>2</sup>. Non-epileptic seizures manifesting as pseudo neurological syndromes are reported less commonly. Our patient carried a diagnosis of medically intractable epilepsy, status post left temporal lobectomy.

When she presented to the ER and gave history of a seizure preceding the onset of hemiplegia and hemisensory loss, we initially attributed her neurological deficits to either Todd's palsy or an acute vascular event. While a seizure at the onset of focal weakness (stroke) is a relative contraindication to thrombolytic therapy due to slightly increased risk of hemorrhagic conversion, a stroke work was initiated none the less. It was only the inconsistency in her neurological examination that made us reconsider our diagnosis. Negative MRI and video-EEG study further strengthened the case for pseudo paralysis and intravenous thrombolytic therapy was withheld.

It is important that pseudo neurological syndromes such as pseudo paralysis and pseudo hemisensory loss be considered in the differential diagnosis of an epilepsy patient presenting with focal neurological deficits especially if they are young and lack traditional vascular risk factors for stroke. Patients though should be thoroughly investigated before making a diagnosis of a pseudo neurological syndrome. Thrombolytic therapy given inadvertently to such patients may have disastrous consequences.

## **References**

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