PNES (Psychogenic Non-Epileptic Seizure) vs. True Epileptic Seizure

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Terminology

- The terminology on the topic has been variable and confusing.
- Seizure *(from to the verb: seize)*
  - Spell

  vs.
  - Epileptic Seizure
- PNES
  - psychogenic nonepileptic seizure

  vs.
  - Physiologic nonepileptic seizure

Paroxysmal Physiologic NonEpileptic Seizures: Neonates, Infants, Toddlers

- Jitteriness
- Benign Myoclonus
- Head Banging, Body Rocking
- Startle Disease or Hyperekplexia
- Cyanotic Breath-Holding Spells
- Self Gratifiication
- Shudderings
- Paroxysmal Vertigo

Paroxysmal Physiologic NonEpileptic Seizures: Childhood

- Night Terrors (Pavor Nocturnus) and Nightmares
- Sleepwalking (Somnambulism) and Somniloquy
- Tics
- Chorea
- Staring Spells (Daydreaming)
- Stereotypic Movements
- Rage Attacks (Episodic Dyscontrol Syndrome)
- Munchausen Syndrome by Proxy
- Recurrent Abdominal Pain

Paroxysmal Physiologic NonEpileptic Seizures: Adolescence

- Syncope
- Narcolepsy and Cataplexy
- Basilar Migraine
- Confusional Migraine
- Tremor
- Panic Disorders

Psychogenic Nonepileptic seizure (PNES)

- PNESs, as the focus of this discussion, resemble epileptic seizures and present as a sudden, involuntary, time-limited alteration in behavior, motor activity, autonomic function, consciousness, or sensation.

- However, unlike epilepsy, PNESs do not result from epileptogenic pathology and are **not** accompanied by an epileptiform electrographic ictal pattern.

Classic clues suggestive of a PNES

- Ineffectiveness of multiple antiepileptic drugs
- Induced by stress or emotional upset
- Lack of physical injury
- Lack of headache or myalgias following convulsions
- Lack of incontinence
- History of sexual or physical abuse
- Evidence suggestive of another conversion

Ictal characteristics that suggest PNES

I. Gradual onset of ictus; prolonged duration
II. Atypical or excessive motor activity (such as rolling from one side to the other, pelvic thrusting, or out-of-phase jerking
III. Waxing and waning amplitude
IV. Intelligible speech
V. Bilateral motor activity with preserved consciousness

Ictal characteristics that suggest PNES

VI. Clinical features that change from one spell to the next

VII. Lack of postictal confusion

VIII. Postictal crying

IX. Eyes closed during the ictus or resistance to eye opening

X. Purposeful resistance to passive movements

Beware!

- **NOT** all bizarre behaviors are PNES!

- Many are real epileptic seizures, especially FLE.

DDx other than epileptic seizures

- Syncope – Cardiogenic, orthostasis
- Movement disorders - Tics, startle attacks, tremors, myoclonus
- Sleep disorders - Narcolepsy, restless legs syndrome, sleep behavioral disorder
- Other psychiatric disorders (panic disorder, posttraumatic stress disorder (PTSD), psychotic disorders

DDx other than epileptic seizures

- Malingering
- Medications - Toxicity (eg, tremors from high levels of valproic acid), akathisia (from neuroleptics and possibly antidepressants), withdrawal from medications such as benzodiazepines
- Drugs of abuse (inhalants, hallucinogens)

Lab tests for PNES

- MRI of brain
- EEG
- Prolonged video-EEG monitoring
- Echocardiogram
- Holter monitor
- Tilt-table test
- Prolactin level 30 minutes after the event
- Provocative EEG with placebo induction (no longer routinely performed in many centers)

What is the nature of PNES?

- In DSM, PNES is classified as one type of "Conversion Disorder"
- Presentations of PNES include motor and sensory deficits (such as hemiparesis, paraparesis, and hemisensory loss), blindness, swallowing difficulties (globus hystericus), **and nonepileptic seizures**.

Hysteria- a term long lived for 2 millennia- disappeared from DSM, and was substituted by "somatoform disorders" in 1968.

Box 1: Diagnostic categories encompassing the former category of "hysteria," as defined in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed.[1]

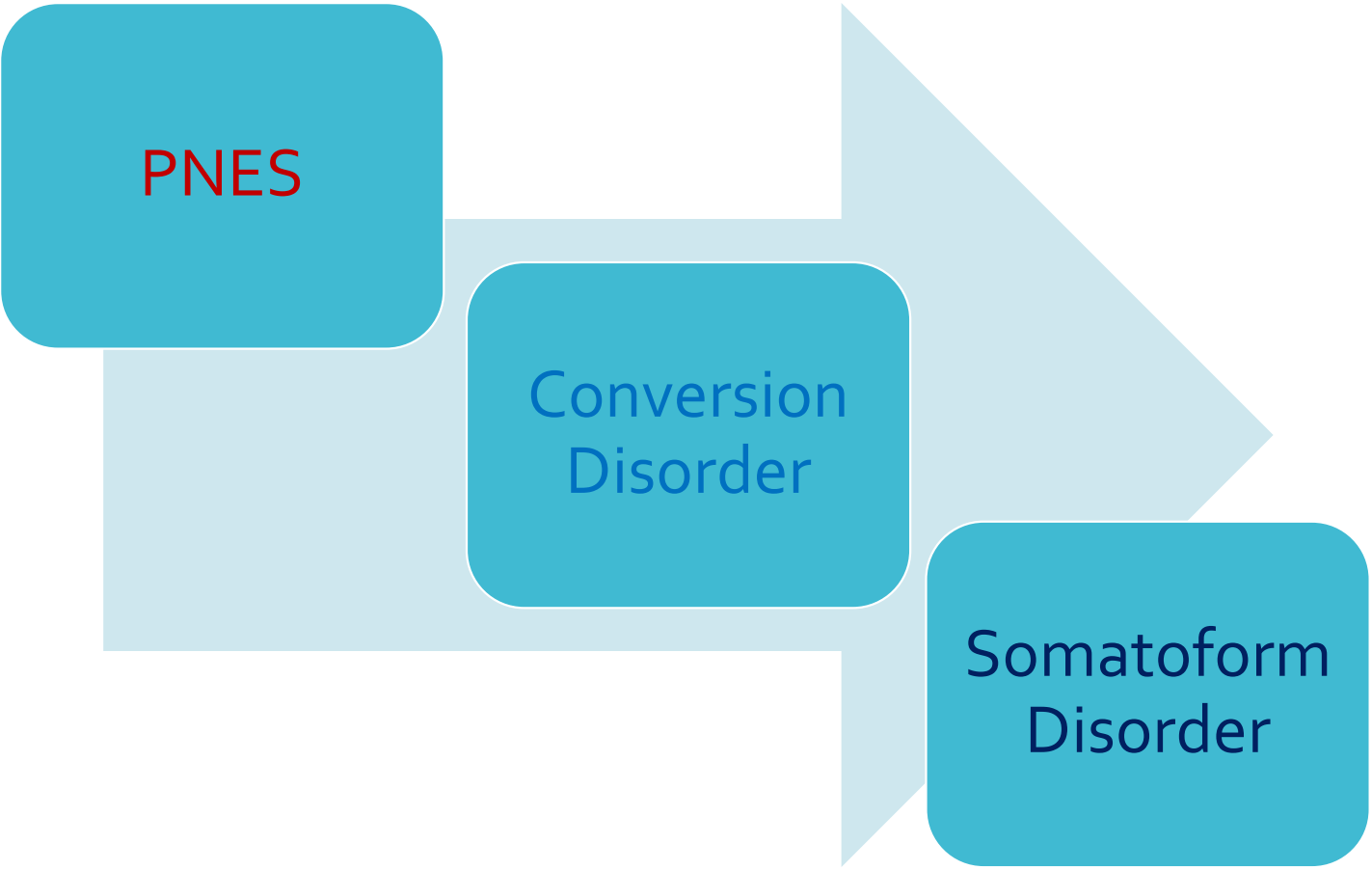
Somatoform disorders

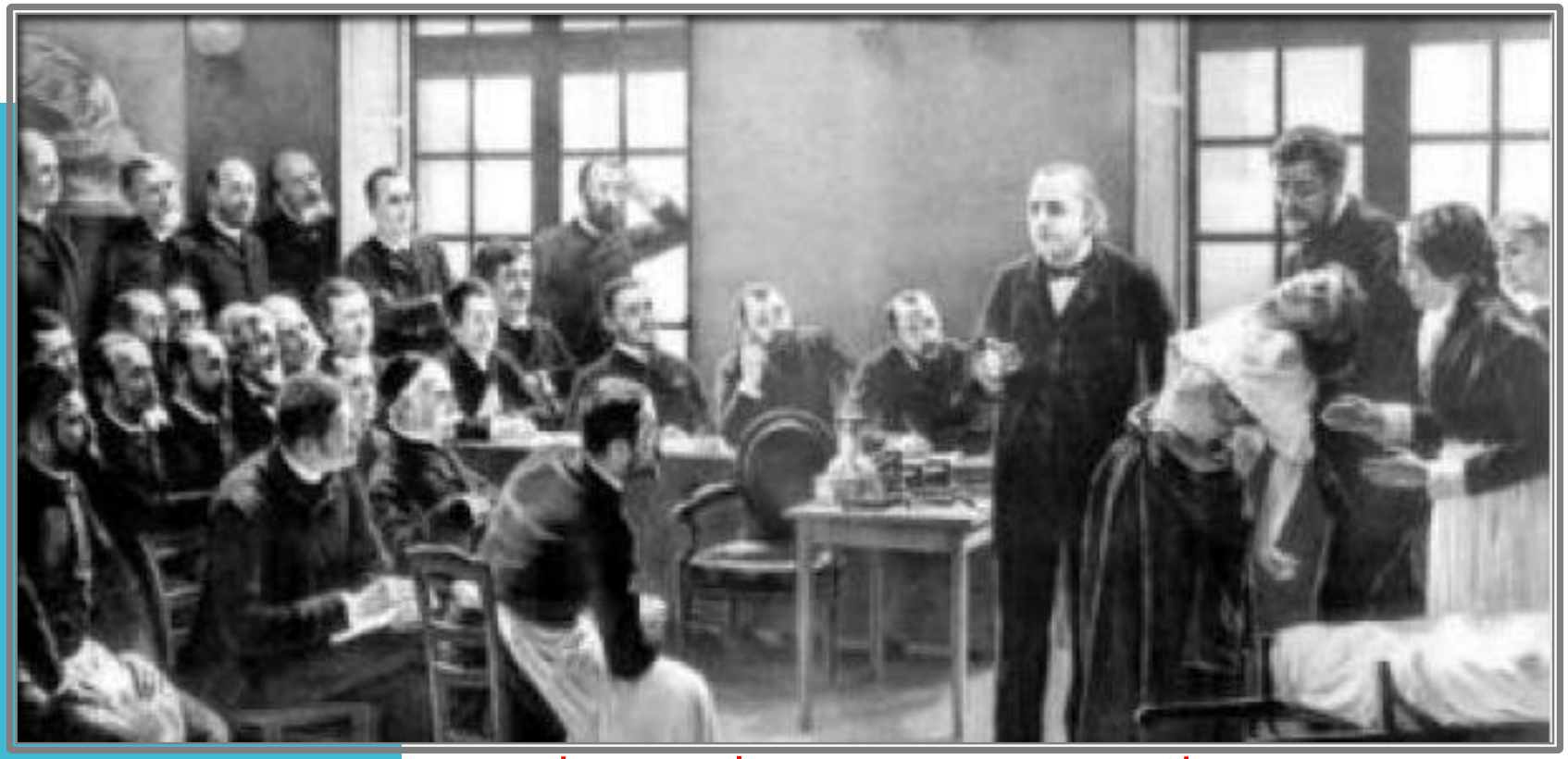
- Somatization disorder*
- Conversion disorder*
- Undifferentiated somatoform disorder
- Pain disorder
- Hypochondriasis
- Body dysmorphic disorder

Dissociative disorders

- Dissociative amnesia*
- Dissociative fugue
- Dissociative identity disorder
- Depersonalization disorder
- Dissociative disorder not otherwise specified (this includes the Ganser syndrome)

*Diagnoses particularly relevant to the former diagnostic category of "hysteria."


PNES
Conversion Disorder
Somatoform Disorder



French neurologist Jean Martin Charcot shows colleagues a female patient with hysteria at La Salpêtrière, a Paris hospital.

Sazz and others attacked

Charcot, Janet, and Freud

Today the situation is the same

- Many of the physicians do not really believe in something as conversion, different from malingering.

But how something like this is possible?

The answer is:

The phenomenon of

DISSOCIATION!

But, what is dissociation??

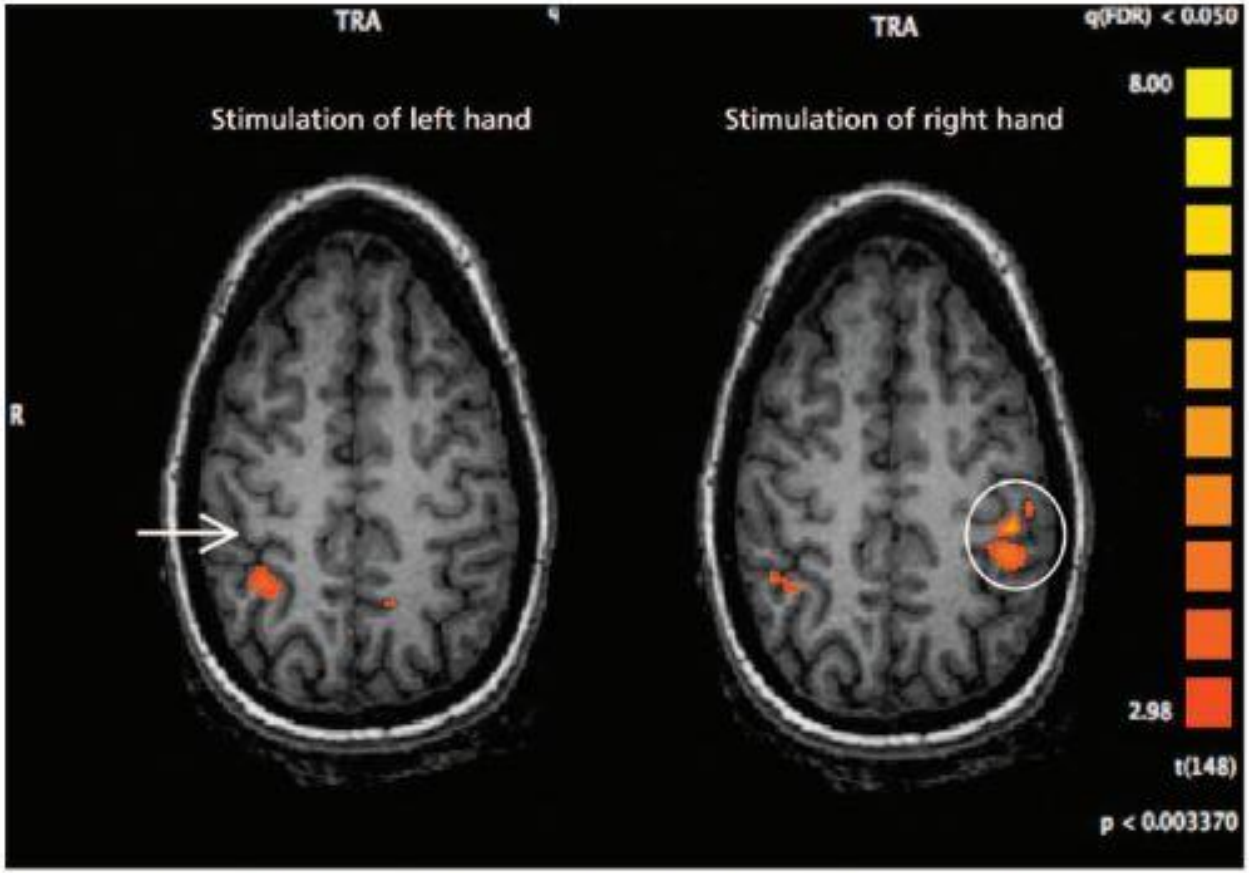


Figure 1: Functional magnetic resonance image showing somatosensory activity evoked by stimulation in a patient with sensory conversion disorder affecting the left hand. When the patient's left hand was stimulated, no activity was seen in the primary somatosensory cortex (arrow). However, increased activity was seen in this area of the brain when the patient's right hand was stimulated (circle).

Final Points

- The issue of coexisting epilepsy
- PNES may occur in children as young as 5 or 6 years of age.
- The gender difference is not seen until adolescence.
- A key concern for children with PNES is that serious underlying psychosocial stressors, such as sexual or physical abuse, may be active at the time of diagnosis and require acute intervention.

Thanks for your attention

حرفهاي ما هنوز ناتمام...

تا نگاه مي كني :

وقت رفتن است

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آي ...

ناگهان

چقدر زود

دير مي شود !