Conversion Disorder: Motor Paralysis

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Agenda

- Intro/History
- Definition
- Differential Diagnosis
- Clinical Characteristics
- Exam Findings
- Treatment
- Outcomes
46 yo female admitted to neuro with sudden inability to walk at home

W/U negative: MRI, LP, multiple labs, nerve conduction studies

Neuro exam variable

Does not seem too concerned

Bowel and bladder OK

Neurologist Dx: Possible Conversion Disorder

Pt refuses psychiatric exam

Family can’t take her home

What is THE PLAN?
Conversion Disorder

- Motor or sensory function suggests neuro/medical condition
- Etiology associated with psychological factors
- Often sudden dramatic onset
“Hysteria” 4000 years ago used by the Egyptians

- From the Uterus (hysterus)
- Seizures, numbness, paralysis, blindness
17th and 18th Centuries:
- “Nervous Disorder” “Vapors/spleen”
- Lhermitte
  - “hysteria is the mother of deceit and trickery"
- Charcot
  - “Global disorder of the brain”
Intro/History

- Freud
  - Sexual trauma
  - Anxiety "converted" into physical symptoms
"He's still in therapy."
A Somatiform Disorder (Hysterical Neurosis–Conversion type)

Psychological Disorder

- Somatic symptoms
- No physiologic abnormalities
- Underlying psychological basis
11–500/100,000
3% outpatient referrals to mental health clinics
General medical/surgical inpatients with identified conversion symptoms 1–14%

- DSM-IV-TR 2000
Malingering:
- Patients knowingly fake their symptoms
- Conscious motive: obvious primary or secondary gain
- Evasive and uncooperative with evaluations and therapy
- Avoid procedures
- When exposed: angry, leave AMA
Difficult to Prove
- Patient confesses
- “caught out”

MRI Frontal lobe activation?
- Discrete neurophysiological correlates in prefrontal cortex during hysterical and feigned disorders of movement. Lancet 2000
Conversion Disorder is NOT Factitious Disorder (Munchausen Syndrome)

- Knowingly Fake Symptoms
- Unconscious motive
- No obvious external motive
- Prefer sick role
- Move hospital to hospital
- Allow procedures
Weakness—Exclude other causes

Table 1. Causes Of Weakness Grouped By Anatomic Subunit.

<table>
<thead>
<tr>
<th>Central (upper motor neuron)</th>
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<tbody>
<tr>
<td>Cerebrum</td>
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<tr>
<td>Stroke</td>
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<tr>
<td>Space-occupying/structural lesion</td>
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<tr>
<td>- Left (dominant) cerebral hemispheric process</td>
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<td>- Right (nondominant) cerebral hemispheric process</td>
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<tr>
<th>Subcortex/Brainstem</th>
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<td>Stroke</td>
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<tr>
<td>Space-occupying/structural lesion</td>
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<tr>
<td>- Lacunar syndromes</td>
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<tr>
<td>- Midbrain/brainstem syndromes</td>
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<table>
<thead>
<tr>
<th>Spinal cord</th>
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<tr>
<td>Acute transverse myelitis (infectious or inflammatory)</td>
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<tr>
<td>Spinal cord infarct</td>
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<tr>
<td>Spinal epidural or subdural hemorrhage</td>
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<tr>
<td>Central intervertebral disc herniation</td>
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<tr>
<td>Tumors (metastatic or primary)</td>
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<td>Multiple sclerosis</td>
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<th>Peripheral (lower motor neuron)</th>
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<tr>
<td>Anterior horn</td>
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<tr>
<td>Amyotrophic lateral sclerosis*</td>
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<tr>
<td>Poliomyelitis*</td>
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| Spinal nerve root              |  |
| Intervertebral disc herniation |  |

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<thead>
<tr>
<th>Polynuropathies</th>
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<tbody>
<tr>
<td>Guillain-Barré syndrome*†</td>
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<tr>
<td>Ciguatoxin (ciguatera poisoning)†</td>
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<tr>
<td>Tetrodotoxin poisoning (puffer fish poisoning)†</td>
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<tr>
<td>Saxitoxin (paralytic shellfish poisoning)†</td>
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<tr>
<td>Porphyria*</td>
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<tr>
<td>Lead or other heavy metal poisoning*</td>
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<tr>
<td>Alcohol- or drug-induced</td>
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<tr>
<td>Diabetic</td>
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| Plexopathies                  |  |
| Brachial                      |  |
| Lumbar                        |  |

| Peripheral neuropathies       |  |
| Nerve compression syndromes   |  |

| Neuromuscular junction disorders |  |
| Myasthenia gravis*              |  |
| Lambert-Eaton myasthenic syndrome*† |  |
| Botulism*                       |  |
| Tick paralysis*                 |  |
| Organophosphate poisoning*      |  |

| Myopathies                    |  |
| Inflammatory (polymyositis)*   |  |
| Electrolyte-induced*           |  |
| Alcohol- or drug-induced       |  |
| Muscular dystrophy*            |  |
| Endocrine-related*             |  |

| Nonphysiologic/Noncategorical |  |
| Conversion disorder           |  |
| Malingering                    |  |
| Chronic fatigue syndrome      |  |
| Anxiety disorders             |  |
| Fibromyalgia                   |  |
| *Neuromuscular cause of acute respiratory failure |  |
| †Frequently associated with autonomic dysfunction |  |
Have a seat Kermit. What I’m about to tell you might come as big shock...
Clinical Characteristics
Conversion Paralysis

- Paralysis often variable
- One or more limbs, part of a limb, hemiparesis, paraplegia
Clinical Findings

- Inconsistent
  - Tone
  - Sensory. Forced choice tests
  - Antagonist muscles
  - “Give way” weakness
  - “la belle indifference”?
Clinical Characteristics
Conversion Paralysis

- Normal (Usually):
  - rectal sensation
  - Bowel and Bladder function
Physical Exam

- Normal Deep Tendon Reflexes
Vast majority (>90%):
- Paraplegic patients can lift up the knee
- Conversion patients can not

Associated Clinical Characteristics

- Low Education
  - 67% vs. 13% (controls) high school drop out rate
- Presence of Personality disorder
  - 50% vs. 17%
- High Hamilton Depression scores
- 33% concomitant somatic disorder

H/O Physical and Sexual Trauma in 44% patients with conversion disorder

25–50% of patients diagnoses with conversion disorder will subsequently be diagnosed with an organic medical condition (1960s)

4% in recent meta-analysis
- increased awareness
- More advanced diagnostic techniques like MRI
Treatment

- Comprehensive assessment
- Interdisciplinary team
- Avoid stigma of psychiatric hospitalization
- Focus on symptoms
- Early rehab
- Avoid secondary complications
“Pseudo-scientific” explanation.
- “stressors can exacerbate symptoms”

- In wheelchairs **not bed** when not in therapies
- Other therapies used for positive reinforcement
- Treatment sequence
- Psychological eval
Treatment

- Avoid opiates and benzodiazepines
- Avoid unnecessary work-up
- Remember the CD is similar to organic disabilities in that it affects occupational and social lives
Treatment

- Validate suffering, but...
- Positive reinforcement and emphasis on maximal restoration of FUNCTION including:
  - Physical
  - ADLs
  - Psychosocial
  - Vocational
  - leisure
Treat Co-morbid Conditions:

- Depression
- Anxiety
- Sleep disorder
- Underlying medical conditions
Little evidence-based treatment

Role?

- Cognitive behavioral therapy
- Hypnosis
- EMDR
- Psychodynamic therapy
- Therapeutic double-bind?
"I know nothing about the subject, but I'm happy to give you my expert opinion."
6 wheelchair dependent patients
Mean 3 years after Dx
Mean 41 day LOS
All regained mobility
Maintained as outpatient (mean f/u 10 mo)

Successful rehabilitation in conversion paralysis.
Delargy et al. BMJ 1986
Outcome Study
34 Inpatient Rehabilitation patients

- 1973–2000
- <1% of SCI
- 25 men (mean 30 YO)
- 9 women (mean 31 YO)
34 patients

- Presentation
  - 18 (53%) paraplegia, complete or incomplete
  - 11 (32%) hemiplegia or hemi paresis
  - 3 (1%) tetraplegia
  - 1 monoplegia
  - 1 triplegia
Outcome
34 patients

- Final discharge diagnosis:
  - 30 remained CD (as at admission)
  - 4 (12%) changed to Malingering
26% (9) complete Recovery

29% (10) partial

44% (15) unchanged
Study Conclusion

“The interdisciplinary in–patient team management approach in a rehabilitation setting offers the benefits of a comprehensive assessment and treatment for patients with conversion motor paralysis.”

Social Issues

- Role within family
- Occupation
- Insurance
- Disability
Case Report

- Went through inpatient rehab
- 1–1/2 week course
- Could walk short distances
- At 1 mo f/u was ambulatory, had returned to work
- Family counseling
- Very little insight in to the whole admission and Dx
Complex Disease

Complex patients psychologically
  ◦ Unconscious motive

Difficult Work-up

Focus on Function

Some Positive Outcomes