

# CONVERSION DISORDER

## **Background**

1. Definition:
  - presentation with neurologic symptoms related to either voluntary motor or sensory functioning<sup>1-5</sup>
  - not explained by organic neurologic disease.
2. General Information:
  - Symptoms referred to as functional, hysterical, non-organic, psychogenic, or dissociative
  - Subtype of Somatoform Disorder (*Diagnostic and Statistical Manual of Mental Diseases IV; DSM-IV*) OR
  - Dissociative (Conversion) Disorders (*International Statistical Classification of Diseases and Related Health Problems 10<sup>th</sup> Revision; ICD-10*)<sup>1-4</sup>
    - Four types of Conversion Disorders<sup>1</sup>:
      - Those with motor symptoms or deficits
      - Those with sensory symptoms or deficits
      - Those with pseudo-seizures
      - Those with mixed presentation

## **Pathophysiology**

1. Pathology of Disease
  - Not completely known
    - underlying brain mechanisms still unproven
  - Links to functional changes in certain brain areas (decrease corticospinal tract activity in functional paresis, increase amygdala activity in motor conversion disorder) inconclusive<sup>2, 5-12</sup>
  - Current accepted theories include<sup>1-2</sup>:
    - Psychological theories
      - Repression (Freudian) –repressed traumatic experiences expressed as physical symptoms
      - Dissociation (Janet) – an idea becomes fixed and then separated or dissociated from the consciousness that is too weak to exert control over it<sup>2</sup>.
    - Learning theories – emphasize environment’s influence on behaviors. Behaviors that have positive results or remove negative stimuli are repeated; whereas, those that result in negative outcomes are avoided<sup>1</sup>. When these behaviors become maladaptive, conversion disorder results.
    - Socio-cultural theory – Troubled feelings/ thoughts of emotionally-disabled person expressed as physical symptoms, which are considered more socially acceptable.
2. Incidence, Prevalence
  - General hospital setting:
    - 20-25% of patients have individual symptoms<sup>13</sup>
    - 5% of patients meet full criteria<sup>14</sup>

- 1 in 5 outpatients in a neurology clinic<sup>15</sup>
- Psychiatric clinic: Lifetime prevalence - 23/100,000<sup>16</sup>
- More common in younger women, rural population, and lower socioeconomic status<sup>1-3, 6</sup>.
- 3. Risk Factors<sup>2-4, 6</sup>
  - Trauma: physical injury/abuse especially during childhood<sup>6</sup>
  - Psychosocial stressors: increased psychosocial stressors (work, relationships) within 1 year of symptom onset
  - Childhood sexual abuse
  - Personality disorders – commonly histrionic and borderline personality disorders
  - Other psychiatric disorders – most especially anxiety and depression
- 4. Morbidity/Mortality
  - Morbidity: depression, anxiety especially panic, personality disorders, substance-abuse disorders<sup>3</sup>
  - Symptom severity related with more frequent early and later adverse life events<sup>7</sup>

**Diagnostics-** is diagnosis of exclusion

1. History<sup>1-3, 6-7, 10-12, 17</sup>
  - Inconsistent motor symptoms or deficits: paraplegia/paraparesis, gait problems, movement disorders, speech disturbances, tremors
  - Sensory symptoms or deficits: blindness, deafness, hyperesthesias
  - Seizures
  - Cognitive impairment
  - Symptoms may disappear when patient is distracted
  - Symptoms may be presented in a dramatic fashion
  - *La belle indifférence* – relative lack of concern about nature or implication of symptoms
2. Physical Examination
  - Complete physical examination with thorough Central Nervous System (CNS) examination and ophthalmologic exam required
  - CNS examination findings typically do not conform to known anatomic pathways or physiologic mechanisms (ex. hemiparesis does not follow known corticospinal pathways; no changes in muscle tone or reflexes; absence of Hoover sign in paraplegic patient).<sup>3</sup>
3. Diagnostic Testing
  - Diagnostic work up to rule out any physical pathology that may explain patient's neurologic complaints.
  - Work up appropriate for the patient's symptoms
    - Unnecessary testing and imaging should be avoided to obviate delay in diagnosis and treatment of conversion disorder.<sup>4</sup>
  - Initial laboratory evaluation may include:<sup>17</sup>
    - Complete blood count
    - Complete metabolic panel
    - Thyroid stimulating hormone (TSH)
    - Thyroxine hormone levels (T4)
    - Erythrocyte sedimentation rate (ESR)

- Antinuclear antibody (ANA)
  - Urine studies
  - Liver function tests
  - Kidney function tests
  - Blood glucose level
  - Antiphospholipid antibody
  - Electroencephalogram (EEG) (if needed)
- Imaging: brain MRI if indicated to rule out physical conditions <sup>17</sup>
- 4. **DSM IV Diagnostic Criteria for Conversion Disorder** <sup>18</sup>
  - One or more symptoms or deficits affecting voluntary motor or sensory function that suggest a neurological or other generalized medical condition
  - Psychological factors judged to be associated with symptom or deficit, because initiation /exacerbation of symptom /deficit preceded by conflicts or other stressors.
  - Symptom /deficit not intentionally produced or feigned (as in factitious disorder or malingering)
  - Symptom /deficit cannot, after appropriate investigation, be fully explained by general medical condition, or by direct effects of a substance, or as a culturally sanctioned behavior or experience.
  - Symptom /deficit causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or warrant medical evaluation
  - Symptom /deficit not limited to pain or sexual dysfunction, does not occur exclusively during the course of somatization disorder, and is not better accounted for by another mental disorder.
    - *Specify type or symptom deficit:*
      - **With motor symptom or deficit**
      - **With sensory symptom or deficit**
      - **With seizures or convulsions**
      - **With mixed presentation**

### Differential Diagnosis

1. Key Differential Diagnoses:<sup>4, 17</sup>
  - Psychiatric:
    - Factitious disorder
    - Malingering
    - Catatonia
    - Delusional disorder with neurologic features
  - Neurologic:
    - Multiple sclerosis
    - Brain tumors
    - Subdural hematoma
    - Basal ganglia disease
    - Optic neuritis
    - Partial vocal cord paralysis
    - Dementia and other degenerative diseases

2. Extensive Differential Diagnoses<sup>4, 17</sup>
  - Systemic:
    - Systemic lupus erythematosus,
    - AIDS (early neurologic manifestations)
    - Polymyositis, acquired myopathies
    - Idiopathic and sarcoma-induced osteomalacia
  - Neurologic:
    - Guillian –Barre
    - Creutzfeldt-Jakob
    - Periodic paralysis
    - Acquired, hereditary, and drug-induced dystonias

## Therapeutics

1. Acute Treatment
  - Early diagnosis and treatment= greater chance of symptom reversal<sup>4</sup>
  - Proper evaluation of symptoms to rule out underlying medical conditions
  - Evaluate for common comorbid psychiatric and personality disorders
  - Consider Conversion Disorder in differential diagnosis in a timely manner
    - Discuss possibility of the disorder with patient early in the work up and after ruling out probable physical causes.<sup>3</sup>
  - Establishment of a strong physician-patient relationship is vital to management of somatoform disorders in general (SOR:C)<sup>3</sup>
    - Build therapeutic alliance with patient<sup>3</sup>
    - Acknowledge patient's discomfort with his or her unexplained physical symptoms
    - Explain disorder to patient making sure he or she understands nature of the disorder
2. Further Management (24hrs): Not applicable
3. Long-term Care
  - Over investigation prolongs patient's suffering and dysfunction.<sup>4</sup>
  - Therapy
    - Cognitive Behavioral Therapy (CBT) is only evidence-based treatment recommendation
      - effective in treating patients with somatoform disorders in general (SOR:B)<sup>3</sup>
      - Aims to identify and change thinking patterns or cognition linked to motor or sensory disturbances.<sup>4</sup>
      - Reduces frequency and intensity of physical symptoms
      - Reduces cost of care
      - Improves patient functioning.<sup>3</sup>
    - Psychodynamic psychotherapy – goal is integration of unconscious conflicts into consciousness resulting in resolution of disorder.<sup>4</sup> Efficacy not as well-studied as CBT.
    - Hypnotherapy – contradictory research results; benefits and harms not yet established.<sup>1</sup>
    - Abreaction or Narcotherapy –

- Interview of patient after induction of a hypnotic state through benzodiazepines or barbiturates <sup>4</sup>
- Recent systematic review with meta-analyses suggests benefit
- Data on drug interview effectiveness is of poor quality. <sup>19</sup>
- Experimental studies to determine efficacy are required.
- Pharmacotherapy, paradoxical intention and transcranial magnetic stimulation currently being investigated. <sup>1 20</sup>

### **Follow up**

1. Return to Office
  - Schedule regular brief follow up visits to establish therapeutic alliance and provide attention and reassurance as new symptoms may arise
  - Limit telephone calls and “urgent” visits. <sup>3</sup>
  - 5 min visit each month necessary, and may be sufficient<sup>3</sup>
2. Refer to Specialist
  - Psychiatric referral helps improve effects of somatoform disorders in general (SOR:B) <sup>3</sup>.
  - Referral to psychotherapist
  - Patients often non-adherent to mental health referral
3. Admit to hospital
  - If patient severely disabled or lives in situation that supports disability or sabotages recovery. <sup>4</sup>

### **Prognosis**

1. Fair
2. Good prognosis is seen in patients with <sup>1</sup>:
  - acute onset and short duration of symptoms
  - a clearly identifiable stressor
  - access to a therapist
  - psychologically minded patient
3. 20-25% of patients may have recurrent symptoms within one year; often associated with stressful event <sup>1</sup>

### **Prevention**

1. Stress reduction to avoid symptom recurrence

### **Patient Education**

1. <http://www.med.nyu.edu/content?ChunkIID=96743>
2. <http://www.nlm.nih.gov/medlineplus/ency/article/000954.htm>
3. <http://www.mayoclinic.com/health/conversion-disorder/DS00877>
4. <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001950/>

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