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#CHAIR2015
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Learning Objective 1

Describe the common signs of catatonia
Describe the diagnostic approach to the patient with catatonia
Learning Objective 3

Describe the management and treatment of the patient with catatonia
Catatonia

“The patient remains entirely motionless, without speaking, and with a rigid, masklike facies, the eyes focused at a distance; he seems devoid of any will to move or react to any stimuli; there may be fully developed ‘waxen’ flexibility, as in cataleptic states. The general impression conveyed by such patients is one of profound mental anguish.”

Kahlbaum K. Die Katatonie oder das Spannungs-Irresein, 1874.
Catatonia

- From the Greek: “low tone”
- A motor syndrome in psychiatric patients
- Catatonic syndrome was seen in 9% of 140 consecutive adult psychiatry admissions
  - Catatonic syndrome diagnosed when at least 4 of the following were present:
    - Immobility, staring, mutism, rigidity, withdrawal, posturing/grimacing, negativism, catalepsy, echo-phenomena, stereotypy, verbigeration

Types of Catatonia

- Catatonia, a syndrome
- Malignant/Lethal Catatonia
- Excited catatonia
- Delirious mania (manic delirium)
- Benign Stupor
- Neuroleptic malignant syndrome
- Toxic Serotonin Syndrome

Catatonia: History of the Nomenclature -1

- 1874: Kahlbaum defines catatonia
- 1919: Kraepelin includes catatonia in dementia praecox
- 1921: August Hoch describes Benign Stupors
- 1952: DSM-II: Schizophrenic reaction, catatonic type (22.2)

Catatonia: Nomenclature-1

- 1980: DSM-III: Schizophrenia, catatonic type (295.20)
- 1994: DSM-IV
  - 295.20 Schizophrenia, catatonic type
  - 293.89 Catatonic disorder due to [general medical condition]
    - Modifier in affective disorders

Catatonia Nomenclature

**DSM-V**

- Associated with Another Mental Disorder; Due to Another Medical Condition
- “The clinical picture is dominated by > 3 of the following symptoms”
  - Stupor (no psychomotor activity, not actively relating to environment)
  - Catalepsy (passive induction of a posture held against gravity)
  - Waxy Flexibility (slight, even resistance to the examiner)
  - Mutism
  - Negativism (opposition… to instructions)
  - Posturing (spontaneous maintenance of posture against gravity)

Catatonia Nomenclature

DSM-V

- Associated with Another Mental Disorder; Due to Another Medical Condition
- “The clinical picture is dominated by > 3 of the following symptoms”
  - Mannerism (odd...caricature of normal actions)
  - Stereotypy (repetitive...frequent, non-goal-directed movements)
  - Agitation
  - Grimacing
  - Echolalia (mimicking another’s speech)
  - Echopraxia (mimicking another’s movements)

The Grey Zone Between Severe Mood Disorder and Catatonia

- **Catatonic stupor**
  - When does psychomotor retardation become ‘stupor’?
  - When does ‘speech latency’ become ‘mutism’?

- **Catatonic excitement**
  - When does psychomotor acceleration become ‘catatonic excitement’?
  - When does pressured speech with flight of ideas become ‘verbigeration’?
Catatonia-Manifestation of Mood Disorders

- Catatonia known to more often be a manifestation of mood disorders (48%), rather than schizophrenia (12%)
- 10% of cases are ‘organic’

Catatonia Due to Organic Medical Condition

- Systemic diseases
- Toxic syndromes
  - Serotonin syndrome
  - Neuroleptic malignant syndrome
- Neurologic disorders
  - Intracranial mass
  - CNS lupus
  - Non-convulsive status epilepticus
  - John Cunningham (JC) Disease
  - Viral Encephalitis

Measuring Catatonic Symptoms

BUSH-FRANCIS CATATONIA RATING SCALE
Use presence or absence of items 1-14 for screening
Use the 0-3 scale for items 1-23 to rate severity

1. Excitement:
   Extreme hyperactivity, constant motor unrest which is apparently non-purposeful. Not to be attributed to akathisia or goal directed agitation
   0 = Absent
   1 = Excessive motion
   2 = Constant motion, hyperkinetic without rest periods
   3 = Full-blown asterotonic excitement, endless frenzied motor activity

3. Mutism:
   Verbally unresponsive or minimally responsive
   0 = Absent
   1 = Verbally unresponsive to majority of questions; incomprehensible whisper
   2 = Speaks less than 20 words/5 min
   3 = No speech

5. Posturing/catalepsy:
   Spontaneous maintenance of posture(s), including mundano (e.g. sitting or standing for long periods without reacting)
   0 = Absent
   1 = Less than 1 minute
   2 = Greater than one minute, less than 15 minutes
   3 = Bizarre posture, or mundano maintained more than 15 minutes

7. Echopraxia/echolalia:
   Mimicking of examiner’s movements/speech
   0 = Mimicking of examiner’s movements/speech
   1 = Occasional
   2 = Frequent
   3 = Constant

2. Immobility/stupor:
   Extreme hypoactivity, immobile, minimally responsive to stimuli
   0 = Absent
   1 = Sits abnormally still, may interact briefly
   2 = Virtually no interaction with external world
   3 = Stuporous, non-reactive to painful stimuli

4. Staring:
   Fixed gaze, little or no visual scanning of environment, decreased blinking.
   0 = Absent
   1 = Poor eye contact, repeatedly gazes less than 20 seconds between shifting of attention; decreased blinking
   2 = Gaze held longer than 20 seconds, occasionally shifts attention
   3 = Fixed gaze, non-reactive

6. Grimacing:
   Maintenance of odd facial expressions.
   0 = Absent
   1 = Less than 10 seconds
   2 = Less than 1 minute
   3 = Bizarre expression(s) or maintained more than 1 minute

8. Stereotypy:
   Repetitive, non-goal-directed motor activity (e.g. finger-play, repeatedly touching, patting or rubbing self); abnormality not inherent in act but in frequency.
   0 = Absent
   1 = Occasional
   2 = Frequent
   3 = Constant

Catatonia: Primary Signs
Percentage of Patients with Sign

- Mutism (85%)
- Immobility / Stupor (100%)
- Staring (92%)
- Posturing/Grimacing (73%)
- Withdrawal/Refusing to eat (78%)
- Rigidity (66%)
What is the Physiologic Setting for Primary Catatonic Stupor?

- EEG: Highly variable with patients showing slowing, or reduced alpha, or bilateral beta, or flat tracings
  - EEG not helpful unless it shows classic pathology like epileptiform discharges

- SPECT: Regional decreases in brain perfusion, improved with ECT

Complications of Catatonic Stupor

- Aspiration pneumonia
- Inanition
- Contractures
- Decubiti
- Deep vein thrombosis
- Pulmonary embolism
- Death

Treatment of Catatonia with Sedatives

- **Barbiturates:** Amobarbital IV, 500mg/10ml; 1 ml/40 seconds to relief or sleep
- **Benzodiazepines:** Lorazepam
  - IV, 1mg/2 min to relief or sleep
  - Oral, 4mg-16 mg/day
- 12 of 15 episodes responded to oral lorazepam

In a cross-over design, 20 adults with catatonic mutism were assigned 1:1 to first receive i.v. 5% amobarbital (up to 500 mg) versus saline over 10 minutes, then crossed over to the other condition.

- 6/10 responded to amobarbital and none to saline ($p < 0.005$).
- In the cross-over, 4 who had failed saline responded to amobarbital (none who failed amobarbital responded to saline).
- All in all, 10 or 20 responded to amobarbital, and none to saline.

ECT for Catatonia

- ECT is the definitive treatment, with short-term remission rates of 80%\(^1\)
- Failure to respond to a sedative does not necessarily mean no response to ECT\(^2\)
- Bilateral electrode placement best studied, but case series of RUL *in press* looks to be effective
- Consider Initial daily treatment x 3 ("en bloc")
- Sustained by standard ECT regimen
- Catatonia relieved within 2-4 ECT
- May need IM ketamine anesthesia initially if it is excited catatonia

Caution!

- Neuroleptics are risky- may precipitate neuroleptic malignant syndrome

Assessment of the Patient with Catatonic Stupor

- Routine psychiatric history and physical
- Catatonic signs checklist or rating scale
- No prior psychiatric history?
  - Consider anatomic imaging, EEG, LP
- Prior psychiatric history?
  - Probably can omit neurodiagnostics
- Prior response to ECT?
- Prior history of complications such as DVT?

Management of the Patient with Catatonic Stupor

- Support for intravascular volume and nutrition
- Measure urinary input and output: do not allow urinary retention
- Assure some mobility or ambulation with nursing or physical therapy if necessary
- Assess need for compression stockings
- Assess need for subcutaneous heparin
- Consider IV/IM/PO lorazepam
  - Take care not to cause respiratory suppression

Management of the Patient with Catatonic Stupor

- Move quickly to make preparations for ECT, whether you think you will need it or not
- How will you get consent?
  - Advanced directives, next of kin, guardianship, court-ordered
- If no sustained improvement with (high dose) lorazepam, or if catatonia has been continuing for more than a few days, then start ECT
- Pick an ECT technique likely to produce quick results: bilateral, high dose, daily sessions
- Cognition is a less important concern

Catatonia is among the most dramatic, the most life-threatening, and most treatment responsive conditions in psychiatry.

Mild forms (‘catatonic features’) are more common than we think.

Understanding of catatonia is hampered by lack of capacity of persons with catatonia.

Is the grimacing, mutism, and stereotypy seen in pervasive developmental delay a form of catatonia? Would it respond to ECT?
Questions & Answers