Catatonia

Team 1

4/20/15 and 4/21/15

Overview

- Catatonia is a syndrome—typically episodic, with periods of remission—characterized by the presence of a variety of behavioral and motoric traits
- Originally described in 1874 by Karl Ludwig Kahlbaum
- Video: Newcastle University
  - https://www.youtube.com/watch?v=_s1lzxHRO4U

Catatonia Classifications

- DSM-V:
  - Catatonia associated with another mental disorder
  - Catatonic disorder due to another medical condition
  - Unspecified catatonia

Catatonia Classifications

- Excited state
- Psychomotorically retarded state

Presentations

- Marked psychomotor disturbance that may involve:
  - Decreased motor activity
  - Decreased engagement during interview or physical exam
  - Or excessive and peculiar motor activity
- Motoric immobility
  - Severe
    - E.g., stupor
  - Moderate
    - E.g., catalepsy and waxy flexibility

Presentations

- Decreased engagement
  - Severe
    - E.g., mutism
  - Moderate
    - E.g., negativism
- Excessive and peculiar motor behaviors
  - Complex
    - E.g., sterotypy
  - Simple
    - E.g., agitation
  - May include echolalia and echopraxia

Presentations

- In extreme cases, the same individual may wax and wane between decreased and excessive motor activity

- There is decreased recognition and lack of awareness of catatonia, especially due to opposing clinical features and variable manifestations

DSM-V

- The clinical picture is dominated by three (or more) 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 positioning by examiner

DSM-V

- Mutism
  - No, or very little, verbal response [exclude if known aphasia]
- Negativisim
  - Opposition or no response to instructions or internal stimuli
- Posturing
  - Spontaneous and active maintenance of a posture against gravity
- Mannerism
  - Odd, circumstantial caricature of normal actions

DSM-V

- Stereotypy
  - Repetitive, abnormally frequent, non-goal-directed movements
- Agitation, not influenced by external stimuli
- Grimacing
- Echolalia
  - Mimicking another's speech
- Echopraxia
  - Mimicking another's movements

Bush-Francis Catatonia Rating Scale

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 catatonic excitement, endless frenzied motor activity	**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
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	**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
5. Posturing/catalepsy: Spontaneous maintenance of posture(s), including mundane (e.g. setting 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 mundane maintained more than 15 minutes	**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
7. Echopraxia/echolalia: Mimicking of examiner's movements/speech. 0 = Mimicking of examiner's movements/speech 1 = Occasional 2 = Frequent 3 = Constant	**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
9. Mannerisms: Odd, purposeful movements (hopping or walking tiptoe, saluting passers-by or exaggerated caricatures of mundane movements); abnormality inherent in act itself. 0 = Absent 1 = Occasional 2 = Frequent 3 = Constant	**10. Verbigeration:** Repetition of phrases or sentences (like a scratched record). 0 = Absent 1 = Occasional 2 = Frequent 3 = Constant
11. Rigidity:	**12. Negativism:**

Pathogenesis (One simplified hypothesis)

- Imbalances in the excitatory-to-inhibitory ratio of glutamate to GABA
- Too much excitatory signal from increased glutamate → brain "shuts down" → psychomotorically retarded signs
- Benzodiazepines work on the GABA receptors, bringing the ratio more towards its norm
- Dopamine agonists improve catatonia in rats → dopamine antagonists (i.e., antipsychotics) worsen catatonia

Malignant Catatonia

- Catatonic signs, motoric excitement, stuporous exhaustion, autonomic instability, respiratory failure collapse, coma, and ultimately death
- Acute in onset
- Can present both in agitated and stuporous states
- Untreated malignant catatonia is fatal in 10% to 20% of cases, with death ensuing within days of onset

NMS = a type of malignant catatonia?

- NMS: motor rigidity, lowered consciousness, autonomic instability, fever
- Neuroleptic malignant syndrome in one paper was considered malignant catatonia caused by administration of antipsychotic and other psychotropic agents
- Responds to anticatatonic treatments, i.e., benzodiazepines and ECT

References

- Diagnostic and Statistical Manual of Mental Disorders – V.
- Brasic, JR. Medscape Reference.
- Dhossche, DM, Stoppelbein, L, and Rout, UK. "Etiopathogenesis of Catatonia." *Journal of ECT.* Vol. 26, Number 4, Dec. 2010.

Updated Case: 21 yo AA male
CC – Bizarre behavior & thoughts

Recap

- 21 y/o male with ~3 year history of schizoaffective disorder w/ 1st break in 2012.
- On admission to VPH, he was started on risperidone, transitioned to olanzapine and given lorazepam for behaviors concerning for catatonia, and due to poor response switched to chlorpromazine on 4/13 with a total of 500mg given since that time.
- He was also started on lithium but received only one dose.
- 4/14/14: After a behavioral code, the pt began to display increasing pulse, blood pressure, sweating, and altered mentation, and was subsequently transferred to VUMC for further management of NMS vs Malignant Catatonia.

ECT Plans

- *4/15/15*
  - Treatment plan created for ECT
  - Tx 4/16 with 3x/week thereafter
  - Consent obtained from mother & patient
- *4/16/145*
  - Pt refused ECT
- *4/17/15*
  - Received consent x2 from pt's mother
  - CODE GREEN w/ Pt refusing ECT & oral meds
  - Pt given ketamine, also on Lithium 450 QHS
  - #1 Bilateral ECT
  - Post-ECT: Pt slept afterwards, felt "good & mind wasn't racing"

Post 1st ECT

- *4/18/15*
  - Severe mood lability & psychotic Sx
  - Pt now using racial slurs & verbally abusive to female RN & other staff
  - Increase Lithium to 600 mg QHS
- 4/19/15
  - CODE GREEN: Clenching fists, posturing, threatening other patients
  - Family visited!
  - Increase Lithium to 900 mg QHS
  - Threatening to “kill people and break everyone’s jaws”
  - Pt taken to seclusion room→taken back to own room to sleep→threatened to kill peer→put back in seclusion room

2nd ECT

- *4/20/15*
  - CODE GREEN x2: Male altercations w/ peers→Moved DR to short hall away from peer
  - CPK Total 3325
  - Given 100 mg ketamine pre-ECT
  - #2 Bilateral ECT
  - Altercation with staff about taking Ativan (believe it isn't working)

- On average, pt receiving > 40 mg Ativan in 24 hr periods
  - Ativan increased to 12 mg QID
  - Seroquel 100 mg PRN added for sleep assistance
  - Not currently giving antipsychotics due to possible NMS vs malignant catatonia

Malignant Catatonia

- Catatonic signs, motoric excitement, stuporous exhaustion, autonomic instability, respiratory failure collapse, coma, and ultimately death
- Acute in onset
- Can present both in agitated and stuporous states
- Untreated malignant catatonia is fatal in 10% to 20% of cases, with death ensuing within days of onset

NMS = a type of malignant catatonia?

- NMS: motor rigidity, lowered consciousness, autonomic instability, fever
- Neuroleptic malignant syndrome in one paper was considered malignant catatonia caused by administration of antipsychotic and other psychotropic agents
- Responds to anticatatonic treatments, i.e., benzodiazepines and ECT

What diagnosis is most frequently associated with catatonia?

Name common physical exam findings consistent with catatonia?

What are the standard treatments for catatonia?

What class of medications should be used cautiously with catatonia?

What are the 3 subtypes of catatonia?

The end