Medical “Clearance” of the “Psychiatric” Patient

Michael Jay Bresler, M.D., FACEP

Clinical Professor
Division of Emergency Medicine
Stanford University
School of Medicine
I have no financial relationships to disclose.
Case No. 1

- 22 year old male
- Known bipolar disease
- Several days “speeding”
- Hasn’t been taking his meds
- Presents to you for “medical clearance” prior to psychiatric evaluation
Case No. 1

- Imp: “Acute manic episode”
- Plan: Transferred to psychiatric hospital
Case No. 1

- **Course**
- Later that evening become more confused, irritable, “jumpy”
- 170/115  120  20  39.5
- Grand mal seizure
- Your thoughts ????
Medical or “Psychiatric?”

- Really a problematic definition
- All behavior is ultimately electro-chemical
- Distinction is in some ways artificial
- But in our society,
  - Psychiatrists treat “psychiatric”
  - Other docs treat “organic”
Medical or “Psychiatric?”

And we emergency folks -

We treat ‘em all!
What We Will Discuss Today

Part I - Distinguishing “Medical” from “Psychiatric”

✦ Etiologies of Acute Organic Brain Syndromes
✦ Diagnostic Categories of Psychiatric Syndromes
✦ The Mental Status Exam
✦ Case Studies
Acute Organic Brain Syndromes

The Scope of the Problem
Medical or “Psychiatric?”

Acute “organic brain dysfunction”, also called “delirium”

- 10-30% of older E.D. patients.
- Complicates hospital stay in at least 20% of patients 65 & older


>70% of ED patients with OBS lack a previous diagnosis

Medical or “Psychiatric?”

Hospitalized patients with delirium

- $6.9 \text{ billion} \ (2004) \ Medicare \ expense
  
  Inouye \textit{N Engl J Med} 2006;354:1157-65

- Mortality rate 22-76%
  
  Comparable to death rates for AMI or sepsis.
  
  APA \textit{Am J Psychiatry} 1999;156:Suppl:1-20

- One year mortality rate 35-40%
  
  Moran \textit{Aust J Hosp Pharm} 2001;31:35-40
Etiologies of Acute Organic Brain Syndromes
Medical/Surgical illnesses presenting psychiatrically
“Organic Brain Syndromes” (OBS)

- **Toxic**
  - Prescribed or abused drugs
  - Side effect, intoxication or withdrawal
- **Toxins**
  - Plants, poisons
Medical/Surgical illnesses presenting psychiatrically “Organic Brain Syndromes” (OBS)

- **Infection**
  - **Brain**
    - Encephalitis, meningitis
  - Any other organ
  - Systemic
Medical/Surgical illnesses presenting psychiatrically
“Organic Brain Syndromes” (OBS)

- Neurosurgical
  - Occult subdural hematoma
  - Concussion
  - Traumatic brain injury
  - Abscess
  - Tumor
Medical/Surgical illnesses presenting psychiatrically
“Organic Brain Syndromes” (OBS)

- Neurologic
  - Post-ictal
  - Degenerative
    - Alzheimer’s, multi-infarct, et al
  - Various encephalopathies
Medical/Surgical illnesses presenting psychiatrically
“Organic Brain Syndromes” (OBS)

- Cerebrovascular
  - Stroke
  - TIA
  - Multi-infarct dementia
  - Vasculitis
  - Hypotension
Medical/Surgical illnesses presenting psychiatrically
“Organic Brain Syndromes” (OBS)

- Metabolic
  - Glucose
  - Electrolytes
  - Hypoxia
  - Hepatic failure
  - Renal failure
Medical/Surgical illnesses presenting psychiatrically “Organic Brain Syndromes” (OBS)

- **Endocrine**
  - Thyroid
  - Parathyroid
  - Adrenal
  - Pituitary
Medical/Surgical illnesses presenting psychiatrically
“Organic Brain Syndromes” (OBS)

- Oncologic
  - Brain
  - Systemic
    - Hormone secreting tumor
So -

How do we distinguish “organic” from “psychiatric”? 
Diagnostic Categories of Psychiatric Syndromes
Diagnostic Syndromes

“Organic Brain Syndrome”

- Behavioral disorder with a “non-psychiatric” medical/surgical cause
- A term in and out of favor by psychiatrists
- But quite useful for Emergency Medicine - So we’ll use it!
NOT CONFUSED

Anxiety
Stress
Panic
Depression

Schizophrenias

Mood “Affective” Disorders

Major Depression
Bipolar Disorders

Non-organic “Functional”

CONFUSED

“Organic” Medical/Surgical

Acute Delirium
Chronic Dementia

Toxic, Metabolic, Trauma, Infection, etc
What was missing in the evaluation of the patient in Case No.1?

The Mental Status Examination
The full MSE performed by psychiatrists is very involved and lengthy.

Many abbreviated versions for “rapid” evaluation in the E.D. Often problems with sensitivity, specificity, or both.

What follows is a distilled version applicable to Emergency Medicine.
Mental Status Exam

- General behavior
- Mood and affect
- Insight and judgment
- Thought and language
- Cognitive function
Mental Status Exam

- General behavior
- Mood and affect
- Insight and judgment
- Thought and language -> Psychotic
- Cognitive function > Organic
Mental Status Exam

Thought and Language

- Thought process
  - Connections between thoughts
- Thought content
  - The actual thoughts (delusions, etc.)
- Perception
  - Misinterpretation of real objects (illusions)
  - Hallucinations
Mental Status Exam

Thought and Language
Abnormal Perception

- Hallucinations
  - Auditory
    - Most common in schizophrenia
  - Visual, gustatory, olfactory, tactile
    - Assume medical cause till proven otherwise
Abnormal Thought or Language

- Often the hallmark of psychosis
- The patient is confused
- However -
  - The patient may - or may not - have “organic” brain dysfunction
- Another part of the MSE is the key
Mental Status Exam

- General behavior
- Mood and affect
- Insight and judgment
- Thought and language
- Cognitive function
Mental Status Exam

Abnormal cognition is pathognomonic of “organic” brain dysfunction

Many patients have died because patients with organic dysfunction were dismissed as just “crazy”
Mental Status Exam

- **Cognitive function is normal** in schizophrenia and affective/bipolar psychoses.
- **Cognitive function is abnormal** in psychoses due to medical/surgical causes: neurologic, endocrine, toxologic, or structural pathology.
Diagnostic Syndromes

“Organic Brain Syndrome”

★ Impaired cognitive function is the hallmark of organic brain syndrome

★ This is what we are looking for!
Cognitive Function (Cognition)

- Level of Consciousness
- Orientation
- Attention
- Memory
- (Fund of) Information

LOAMI
Mental Status Exam
Cognitive Function

- **Level of Consciousness**
  - Alert, drowsy, obtunded, comatose

- **Orientation**
  - Person, time, place, situation
Mental Status Exam
Cognitive Function

- **Attention**
  - May be obvious. If not
    - Repeat 6 digits forward, 4 in reverse
    - Arithmetic: 2 digits
    - Serial 7’s from 100
    - Count backward from 100
Mental Status Exam
Cognitive Function

Memory

- Immediate
  - 3 words or objects at 1 & 5 minutes

- Recent
  - Events of last few hours or days
  - r/o confabulation by asking again

- Remote
  - Past medical history
Mental Status Exam
Cognitive Function

Fund of Information

- Should be appropriate to patient’s age, education, social situation
  - Famous people
  - Current events
  - Local geography
Mental Status Exam
Cognitive Function

“WORLD”

A very useful word to test cognitive function (memory, attention)

- Spell it
- Spell it backward
- Re-arrange the letters alphabetically
- Verbal and/or written
Putting it all together

Case Studies to illustrate important points
Mental Status Exams - Minis, Micros, Nanos...

**Remember**

- Patients with either OBS or schizophrenia and affective disorders will be confused.
- They may have language and/or thought disorders.
- But only those with OBS will have abnormal cognition on MSE.
Mental Status Exams - Minis, Micros, Nanos...

Essential points of all MSE’s for OBS

- Impairment of some of the following:
  - Level of consciousness
  - Orientation
  - Attention
  - Memory
  - Fund of Information

LOAMI
Anxiety
Stress
Panic
Depression

NOT CONFUSED

Cognition Normal
Thought Abnormal

Cognition Abnormal
Thought Normal or Abnormal

“Organic”
Medical/Surgical

Acute Delirium

Chronic Dementia

Toxic, Metabolic, Trauma, Infection, etc

Non-organic “Functional”

Mood “Affective” Disorders

Schizophrenias

Major Depression

Bipolar Disorders

“Functional”

Major Depression

Bipolar Disorders

Schizophrenias

Mood “Affective” Disorders

“Organic”
Medical/Surgical

Acute Delirium

Chronic Dementia

Toxic, Metabolic, Trauma, Infection, etc
Case No. 2

- 76 year old woman with history of dementia
- Past week seems more confused
- PMH - CHF, COPD, HTN
- Meds - Lots!
- VS - 140/95 95 18 37.5
- Exam - Confused but otherwise nothing specific
Case No. 2

- Exacerbation of her baseline dementia?
- Or something acute - i.e. super-imposed delirium
Case No. 2

Cognition - LOAMI

- LOC - alert
- Orientation - to name only
- Attention - does not cooperate
- Memory - doesn’t know how she got to hospital
- Information - doesn’t know President
Case No. 2

- Organic findings?
  - YES!

- Chronic?
  - Yes

- Anything acute on exam?
  - ??

- Anything acute by history?
  - YES!
Case No. 2

- **Dementia?**
  - Yes

- **Delirium?**
  - YES!

- Find the cause!
Case No. 2

- WBC - 17.5 with 75 bands
- Sodium - 125
- UA - >100 WBC with WBC clumps
- Lactate 4.0
- Admitted for urosepsis
Case No. 2 - What can we learn from this case?

- While we could not tell from the MSE what was acute vs. chronic, the HISTORY gave the answer.
- Chronic dementia does NOT deteriorate acutely.
- Acute changes of mental status in demented patients is due to a NEW organic cause.
Case No. 2 - What can we learn from this case?

Especially in the elderly, think

- Infection
- Medication
- Electrolytes
- Occult head trauma
Case No. 3

- 27 year old Spanish-speaking male
  “not acting right” per friend
- Healthy, on no meds
- You don’t speak Spanish
- Translator says “he’s not making sense”
Case No. 3

MSE - LOAMI

- LOC - Alert, restless
- Orientation - Gets year wrong
- Attention - wandering
- Memory - doesn’t understand direction
- Information - doesn’t know President
- Reliability of MSE ??
Case No. 3

- **110/70 - 50 - 16 - 37 - 96%**
- **Skin warm, diaphoretic**
- **Eyes - small pupils**
- **Lungs - wheezing**
- **Asthma? Flu? Encephalitis?**
- **What else?**
  - Further history - he’s a gardener
  - Organophosphate poisoning
Case No. 3 - What can we learn from this case?

- The MSE may not be reliable - or possible
- Language and culture may interfere
- History is important
- PHYSICAL EXAM is important
- Toxic encephalopathy is a cause of OBS
Clues on physical exam that may reveal the cause of abnormal behavior

- Vital signs
  - BP, P, R, T, O2
- Skin -
- Pupils -
- Head -
  - Trauma?
- Neck -
  - Supple? Thyromegaly?
Case No. 4

- 76 year old male “not acting right”
- He’s aware of recent memory problems past few weeks
  - Can’t find car keys
- No physical complaints
- Healthy with only hypertension
- Only med is an ARB
Case No. 4

MSE - LOAMI

- LOC - fully alert & conversant
- O - x 4
- Attention - can do serial 7's only x 2
- Memory - OK at 1 minute, not at 5
- Information - has to think about President. Knows recent holiday but can’t name it (?memory)
Case No. 4

- Exam normal, including neurologic
- Lab - CBC, BMP, UA all unremarkable
- Does he show signs of organicity? Yes
- Is he demented? No - “past few weeks”
Case No. 4

Any other studies indicated ??
Case No. 4 - What can we learn from this case?

- Again - importance of history
  - acute delirium vs. chronic dementia
- Occult trauma, especially in elderly and alcoholics
  - They fall!
Case No. 7

- 50 year old male “acting strange”
- Family says periods of hyperactivity and emotional lability, alternating between euphoric and crying
- Inappropriate behavior in public, and in private
- Seems obsessed with sex
- No prior history of mental illness
Case No. 7

MSE

- Thought process
  - Loose association, rambling conversation

- Thought content
  - Thinks is family is trying to kill him
  - Are they ???

- Is he confused?
  - Yes
Case No. 7

- Is he bipolar?
- Is he schizophrenic?
- Is he “organic”

Remember-
- People with the schizophrenias and affective disorders have
  - NORMAL COGNITIVE FUNCTION
Case No. 7

Is he “organic”?

Cognitive function - LOAMI

- LOC - Alert, hyperactive
- Orientation - to person only
- Attention - won’t pay any attention
- Memory - can’t answer questions - says he forgets what was asked
- Information - thinks he’s the king of England
- Delusional or inadequate fund of information?
- Or just BS...?
Case No. 7

- Is he “organic”?  
  - Yes

- Is he demented?  
  - No prior history

- Is he delirious?  
  - Yes
Case No. 7

- What is real?
  - Are his family trying to kill him?
- Is he the king of England?
Case No. 7

- Actually - Yes!

- He’s King George III

- We really don’t know the etiology, but many experts believe it was porphyria
Case No. 7 - What can we learn from this case?

✧ He “cannot” be either schizophrenic or bipolar. Why??
  ✧ A first time confused break after 45 is organic until proven otherwise
  ✧- which it won’t be...

✧ This is a VERY important point
  ✧ Acute mental disorder in middle age or higher without a history before age 45 is organic
  ✧ Find the cause!
Case No. 5-A

- 34 year old male who seeks help because
- The FBI is after him
- Passersby are spying on him
- Says he works with nuclear weapons
- “And by the way, doc, that light bulb above your head is a microphone”
Case 5-A

- The doctor helps the patient unscrew the lightbulb
  - No microphone...

- “By the way, doc, that cloud outside the window is radioactive”
Case 5-A

- Thought
  - Process - OK
  - Content - Delusions (paranoid)
  - Perception - Illusions
    (light, cloud)
Case 5-A

Cognition - LOAMI

- Level of consciousness - OK
- Orientation - OK
- Attention - OK
- Memory - OK
- Fund of information - OK
Case 5-A

Conclusion?

- Thought or language abnormal
- Cognition normal
- NOT organic
- Psychotic?
  - Schizophrenia?
  - Affective (bipolar) disorder?
Case 5-A

Outcome

- Shipped off to Napa State Hospital
- 2 days later the FBI appears
- They’re looking for a nuclear missile scientist with national security clearance who seems to have “gone nuts”
Case 5-A

- So what is “real” about this case?
  - He was telling the truth
  - The FBI was after him!
  - But he was psychotic
    - Paranoid ideation
      - Perhaps not delusional
      - But he did have perceptual illusions
Case 5-A - What can we learn from this case?

- He was not organic
- It was appropriate to send him to the psychiatry service
- May be difficult to distinguish fantasy from reality -
  - for the doctor as well!
- This patient had a bipolar disorder
What We Have Discussed Today

Part I - Distinguishing “Medical” from “Psychiatric”

✦ Etiologies of Acute Organic Brain Syndromes
✦ Diagnostic Categories of Psychiatric Syndromes
✦ The Mental Status Exam
✦ Case Studies
Michael Jay Bresler, M.D., FACEP

Clinical Professor
Division of Emergency Medicine
Stanford University School of Medicine