MEDICAL CLEARANCE OF THE PSYCHIATRIC PATIENT

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DISCLOSURES

- I have no financial relationships to disclose
At the end of this activity, the learner should be able to:

- Discuss an evidence based approach to what/if any tests are routinely necessary in psychiatric patients in the emergency department
- State the ACEP clinical policy on medical clearance of the psychiatric patient
- Know when real-time psychiatric consultation is necessary.
- Understand the various medications available for behavioral control of the emergency psychiatric patient.
PATIENT #1

- 24 y/o female
- H/O schizophrenia
- Presents disheveled, muttering to herself, occasionally screaming out to the room “get outta here!”
  On evaluating her, she states that she is a brain surgeon, a rocket scientist, AND the president of a college (very impressive)
Patient #2

- 20 y/o male
- Friends bring him in to the ER
- He is muttering to himself, very disheveled
- On speaking with him, he states that his roommates are trying to kill him by poisoning his textbooks and computer
- He has no past medical history
PATIENT #3

- 24 y/o male medical student
- Found wandering naked on a bridge late at night, eating tortillas
- Police bring him to the ED
- Patient is making very little sense when you speak with him
PATIENT #4

- 60 y/o male
- H/O Parkinson’s disease
- Recently started some new medications for this
- Pt has been agitated at home, threatening his wife with a knife, not sleeping.
- Wife is very frightened to be at home with him
Psychiatric visits in the ED are very common (6% of ED visits)

- We often find patients require admission for psychiatric evaluation, but have to perform a “clearance” before the patient can have his/her evaluation.
WHAT DOES “MEDICAL CLEARANCE” MEAN?

“‘Medical clearance’ of psychiatric patients is the initial medical evaluation of patients in the ED whose symptoms seem to be psychiatric....The purpose of the medical clearance process is:

- to differentiate organic etiology from functional disorders,
- to determine whether serious underlying medical illness exists that would render admission to a psychiatric facility unsafe or inappropriate, and
- to identify medical conditions incidental to the psychiatric problem that may need treatment in a psychiatric facility.”

MEDICAL CLEARANCE

The idea is to

- Establish if a patient’s symptoms are caused/exacerbated by a medical illness
- Assess and treat any medical situation that requires acute intervention
- Determine if the patient is intoxicated, thereby preventing accurate psychiatric assessment
Why Can’t the Psychiatrists Do This?

- Psychiatry wards are different!
  - “Contamination of transference”
  - Staff with less experience with recognizing acute medical problems
  - Tend not to have medical staff available
  - Decreased staff-patient ratio
  - Danger of a medically unstable patient getting injured
  - Need for participation in the therapy process
  - Managing medical illness takes time away from management of the psychiatric conditions
  - High person-to-person contact (infection risks)
MEDICAL ILLNESSES THAT MIMIC PSYCHIATRIC ILLNESSES:

- DELIRIUM
- Infection
- Metabolic/endocrine diseases
- Medications
- Substance abuse/withdrawal syndromes
- CNS disorders
How often do psychiatric patients have medical problems that cause their symptoms?

- Hall (1981): 100 state hospital psychiatric patients admitted to a research ward
  - 46% had a previously unrecognized medical illness that caused or exacerbated their psychiatric illness
  - 80% had an illness that required treatment

Tintinalli (1994):

- 298 ED patients with psych chief complaints, admitted to the voluntary psychiatry unit
  - 12/298 (4%) required acute medical treatment within 24 hours of psych admission
    - 10/12 (83%) would have been identified by ED history and physical examination alone
      - 8/10 (80%) of these had “medically clear” documented on the chart

Henneman (1994):

- 100 consecutive patients ages 16-65 with new psychiatric complaints
  - Excluded patients with obvious alcohol/drug intoxication, psychiatric patients with previously diagnosed abnormal behavior, psychiatric patients with medical complaints, and overdose or suicide patients.
- 63% had an organic etiology for their complaints
HOW DO WE “CLEAR” A PATIENT?

- Medical clearance evaluation
  - History
  - Physical examination
  - Ancillary testing
From all available sources: patient, family, friends, police, EMS
- HPI: Why now?
- Baseline functioning
- Prior psychiatric history
- Changes in physical, emotional, cognitive function
- Hallucinations / suicidal ideation
- PMH: rheumatologic, endocrine, neurologic, oncologic
- Medication use or changes
- Current/past drug or alcohol use, rehab history
Medical Clearance: Exam

- Vital signs
- Appearance
- Physical exam
  - Neurologic exam
  - Mental status examination (MSE)
MEDICAL CLEARANCE: MENTAL STATUS EXAM (MSE)

- Part cognitive, part psychiatric exam
  - Appearance
  - Behavior and attitude
  - Thought
  - Perception
  - Mood and affect
  - Insight and judgment
  - Sensorium and intelligence

- Uncertain what type of mental status exam is performed by EP’s; most take <5 minutes and test unvalidated pieces of a standard MSE

BRIEF MENTAL STATUS EXAMS

- Mini Mental Status Exam
- Brief Mental Status Exam
Maximum score | Score
---|---
5 | Orientation
5 | Where are we: (state) (county) (town or city) (hospital) (floor)?
3 | Registration
3 | Name three common objects (e.g., "apple," "table," "penny"): Take one second to say each. Then ask the patient to repeat all three after you have said them. Give one point for each correct answer. Then repeat them until he or she learns all three. Count trials and record.
3 | Trials: ___
5 | Attention and calculation
5 | Spell "world" backwards. The score is the number of letters in correct order.
| ___ L ___ R ___ O ___ W ___ |
| Recall
3 | Ask for the three objects repeated above. Give one point for each correct answer.
| (Note: recall cannot be tested if all three objects were not remembered during registration.)
| ___ |
| Language
2 | Name a "pencil" and "watch."
1 | Repeat the following: "No ifs, ands or buts."
1 | Follow a three-stage command:
3 | "Take a paper in your right hand, fold it in half and put it on the floor."
1 | Close your eyes.
1 | Write a sentence.
1 | Copy the following design.

| Total score: | ___ |
Question:
- 1. What year is it now?
- 2. What month is it now?

Present the Memory phrase:
“Repeat this phrase after me: John Brown, 42 Market Street, Chicago”
- 3. About what time is it? (within 1 hour)
- 4. Count backwards 20 to one.
- 5. Say the months in reverse.
- 6. Repeat the memory phase.

Score of one for each incorrect response; maximum weighted error score = 28.

Score Results:
- Normal or minimally impaired: 0-8
- Moderately impaired: 9-19
- Severely impaired: 20-30
 Tested in 1 urban Chicago ED
 Administered to 100 ED patients

 Results:
- Severe impairment: 72% sensitivity, 95% specificity
- Mild impairment: 50% sensitivity, 87% specificity
- Normal: 90% sensitivity, 69% specificity
- Correlated with physician assessment of capacity
- 98% of EPs in the study found it useful

 Never validated beyond this

Reeves (1999): 64 patients admitted from an ED to a psychiatric ward with an unrecognized medical emergency

- 64/64 (100%!) of cases failed to have a documented mental status exam
- 28/64 had inadequate physical examination
- 22/64 had failure to obtain available history
- 22/64 had failure to obtain indicated laboratory or radiologic studies
- 5/64 had failure to address abnormal vital signs

Riba and Hale (1990): 137 patients seen in ED and referred for psychiatric consultation

- Vital signs: documented 68%
- Appearance: 36%
- Neurologic exam: 8%
Tintinalli (1994):

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Henneman (1994) - prospective study of 100 ED patients with new psychiatric complaints

- Excluded: known psych disorders, psych patients with medical complaints, and intoxicated, overdose, or suicidal patients
  - H & P
  - CBC, Chem 7, Ca, CPK, PT
  - EtOH level, UDS
  - If these were normal:
    - CT head
    - LP if T > 37.8°C

- 63% had organic disease
- Recommended labs, CT head, and LP if CT is negative

Olshaker 1997: retrospective study of 345 ED patients with psychiatric complaints
- 65/345 (19%) found to have medical problems of any type
  - History alone - 94% sensitivity
  - Labs - 20% sensitivity
- Screening without labs would have missed two asymptomatic patients with mild hypokalemia
- Universal laboratory screening is of “low yield”
LABORATORY TESTING

- Korn (2000) - LA County Hospital
  - Psych patients go to main ED first
  - Hospital policy: all patients with psychiatric complaints receive H&P, VS, CBC, Chem 7, urine and blood tox testing, pregnancy testing, and CXR

- Retrospective chart review of all patients >16 who required psychiatric evaluation prior to leaving ED

Korn (2000) continued:

- 80/212 (38%) presented with isolated psychiatric complaints and a patient-stated prior psychiatric history
  - 1/80 had a positive pregnancy test
  - 1/80 had mild leukocytosis, not clinically significant
  - Neither changed disposition

- 132/212 (62%) presented with medical CC or significant PMH in addition to their psych complaints or abnormal behavior

Concluded that initial complaint correlates directly with the need for medical clearance in the ED

Janiak 2009:  
- Retrospective chart review of 519 consecutive pts admitted to the inpatient psychiatry service; 502 pts met criteria for the study  
- All pts received CBC/diff, CMP, TSH, free T4, B12, folate, UDS, and UPT - but some received these in the ED and some not until they reached the psych unit  
- 148/502 received testing in the ED  
- 1/502 required further intervention including treatment, further studies, or a change in disposition (46F c/o “manic”, h/o bipolar disorder, with T 38C and HR 114; sent directly to psych without labs in ED)
Dubin, et al 1993:

- 1140 patients “medically cleared” by the ED for psych evaluation
- Four factors identified ALL cases of organic brain syndrome:
  - Age >40 without prior psychiatric history
  - Disorientation
  - Clouding of consciousness
  - Abnormal vital signs

Suggests that patients with any of these 4 factors should suggest a high index of suspicion for organic cause of sx

Routine lab testing probably not necessary
Laboratory testing is wise
- in new-onset psychiatric complaints
- in patients >40 years of age (especially elderly) with psychiatric complaints
- In patients with disorientation or changes in level of consciousness
- In patients with unexplained abnormal VS
Otherwise, lab evaluation should be ordered based on clinical suspicion
Multiple studies have shown that routine UDS testing does not affect ED management in stable patients with normal VS/H&P.

Psychiatrists, however, need these results:
- Help determine etiology of symptoms
- Aid disposition and long-term care
There are NO studies that show:

- a specific BAL at which psychiatric evaluation can accurately begin
- individuals regain adequate decision-making capacity when the BAL reaches the legal limit for driving

Cognitive function should be assessed individually

No evidence to support delaying psychiatric evaluation for obtaining a BAL if the patient is alert, has normal cognition and VS and a noncontributory history and physical exam
Hollister 1995:
- Reviewed 1006 routine screening ECGs in hospitalized psych patients
  - 93 were abnormal
  - Only 43/827 (5.2%) were abnormal in pts ≤50
  - 50/179 (28%) were abnormal in patients >50
- Unclear how relevant this is
- Some psychotropics cause QT prolongation, so ECG might be medicolegally beneficial prior to starting medication

CHEST X-RAY

- Really not necessary, unless you have a patient population at high risk for TB
What testing is necessary in order to determine medical stability in alert, cooperative patients with normal VS, a noncontributory history and physical exam, and psychiatric symptoms?

- Level B recommendation: diagnostic evaluation should be directed by the history and physical examination. Routine laboratory testing is of very low yield and need not be performed as part of ED assessment.
Do the results of a urine drug screen for drugs of abuse affect management in alert, cooperative patients with normal VS, a noncontributory history and physical examination, and a psychiatric complaint?

- **Level C recommendations:**
  - Routine UDS testing does not affect ED management and need not be performed as part of the ED assessment
  - Urine toxicologic screens for drugs of abuse obtained in the ED for the use of the receiving psychiatric facility or service should not delay patient evaluation or transfer

Does an elevated alcohol level preclude the initiation of a psychiatric evaluation in alert, cooperative patients with normal vital signs and a noncontributory history and physical examination?

- **Level C recommendation:**
  - The patient’s cognitive abilities, rather than a specific BAL, should be the basis on which clinicians begin the psychiatric assessment.
  - Consider using a period of observation to determine if psychiatric symptoms resolve as the episode of intoxication resolves.
How to communicate this to the psychiatrists?

- Some concerns with the phrase “medically clear”
  - Implies no medical problems whatsoever
  - Some recommend terms like “medically stable” (Weisberg, 1979)
  - Others recommend EPs provide a summary of the ED evaluation (Tintinalli, 1994)

- Medical Clearance Protocol
- No good evidence
MEDICAL CLEARANCE PROTOCOL

  - Developed between EPs and psychiatrists in Illinois to facilitate communication between specialties
  - Checklist developed from the protocol
  - Uses the BMSE
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<th>FIGURE</th>
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<td>MEDICAL CLEARANCE CHECKLIST</td>
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<table>
<thead>
<tr>
<th>Patient's name</th>
<th>Race</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of birth</td>
<td>Gender</td>
<td>Institution</td>
</tr>
</tbody>
</table>

1. Does the patient have a new psychiatric condition? Yes No
2. Any history of active medical illness needing evaluation? Yes No
3. Any abnormal vital signs prior to transfer?
   - Temperature >101°F Yes No
   - Pulse outside of 50 to 120 beats/min Yes No
   - Blood pressure <90 systolic or >120 diastolic Yes No
   - Respiratory rate >24 breaths/min (For a pediatric patient, vital signs indices outside the normal range for his/her age and sex) Yes No
4. Any abnormal physical exam (unclothed)?
   - Absence of significant part of body, eg. limb Yes No
   - Acute and chronic trauma (including signs of victimization/abuse) Yes No
   - Breath sounds Yes No
   - Cardiac dysrhythmia, murmurs Yes No
   - Skin and vascular signs: diaphoresis, pallor, cyanosis, edema Yes No
   - Bowel sounds Yes No
   - Neurological with particular focus on:
     - Ataxia Yes No
     - Pupillary symmetry, size Yes No
     - Nystagmus Yes No
     - Paralysis, reflexes Yes No
5. Any abnormal mental status indicating medical illness such as lethargic, stuporous, comatose, spontaneously fluctuating mental status? Yes No

**If no to all of the above questions, no further evaluation is necessary. Go to question #6: tests may be indicated.**

| If yes to any of the above questions go to question #6: tests may be indicated. |

6. Were any labs done? Yes No
7. What lab tests were performed?
   - What were the results?
   - Possibility of pregnancy?
   - What were the results? |

8. Were x-rays performed? Yes No
   - What kind of x-rays performed?
   - What were the results? |

9. Was there any medical treatment needed by the patient prior to medical clearance?
   - What treatment? |

10. Has the patient been medically cleared in the ED? |

11. Any acute medical condition that was adequately treated in the emergency department that allows transfer to an SOF? Yes No
    - What treatment? |

12. Current medications and last administered? |

13. Diagnoses:
   - Psychiatric |
   - Medical |
   - Substance abuse |

14. Medical follow-up or treatment required on psych floor or at SOF: |

15. I have had adequate time to evaluate the patient and the patient's medical condition is sufficiently stable that transfer to ____SOF or ____ psych floor does not pose a significant risk of deterioration. (Check one)
    - MD/DO |

Physician Signature

*mi=minute; ED=emergency department; SOF=state-operated psychiatric facility.
EMERGENCY PSYCHIATRIC EXAMINATION (EPE)

- As mental health funding continues to decrease, EDs are forced to play an escalating role in managing psychiatric patients
- ACEP survey 2004: 61% of EP’s have noticed an increase in psychiatric patients
Different emergency psychiatry structures:

- **Dedicated psychiatric unit with full-time staff**
  - Costly, but rapid - appropriate for larger hospitals
  - Can provide inpatient consultation

- **Dedicated psychiatric unit with consulting staff**
  - Admissions generally require transfer to a psychiatric facility

- **No dedicated psychiatric unit or staff**
  - EP must provide the emergency psych exam
  - Psychiatric social worker or Mobile Assessment Team recommended
  - Disposition arranged by EP
  - Admissions require transfer to psychiatric facility
39% of suicide victims visit an ED before their death

Risk factors for successful suicide:
- Male
- Age >60
- Widowed or divorced
- White or Native American
- Living alone
- Unemployed with financial problems
- Recent adverse event
- Clinical depression
- Schizophrenia
- Substance abuse
- History of suicide attempts or ideation
- Feelings of hopelessness
- Panic attacks
- Severe anxiety or anhedonia
Intoxication should not hinder the clinician from taking the history, but the history should be repeated when the patient is clinically sober.

- Substance abuse referral may be more helpful than admission.
Some patients can be discharged:
- Patient is no longer suicidal
- Medically stable
- Patient will “contract for safety” with the physician
- Clinically sober
- Low suspicion for access to firearm
- Social support, when available, has been contacted
- Follow-up is arranged, when possible

Document patient’s low risk features
<table>
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<tr>
<th>Factor</th>
<th>Points</th>
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<tr>
<td>S = Sex (male)</td>
<td>1</td>
</tr>
<tr>
<td>A = Age (&lt;19 or &gt;45 years)</td>
<td>1</td>
</tr>
<tr>
<td>D = Depression or hopelessness</td>
<td>2</td>
</tr>
<tr>
<td>P = Previous suicide attempts or psychiatric care</td>
<td>1</td>
</tr>
<tr>
<td>E = Excessive alcohol or drug use</td>
<td>1</td>
</tr>
<tr>
<td>R = Rational thinking loss</td>
<td>2</td>
</tr>
<tr>
<td>S = Separated, divorced or widowed</td>
<td>1</td>
</tr>
<tr>
<td>O = Organized or serious attempt</td>
<td>2</td>
</tr>
<tr>
<td>N = No social supports</td>
<td>1</td>
</tr>
<tr>
<td>S = Stated future intent</td>
<td>2</td>
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Score of 6-8: full emergency psychiatric evaluation/treatment

Score of 9 or greater: immediate psychiatric hospitalization

SUICIDAL PATIENTS

- Unfortunately, there is no test to determine who is at imminent risk for suicide.
- If well thought-out plan, persistent suicidal thoughts, significant hopelessness, or other high-risk features, either obtain psychiatric consultation or admit the patient on an involuntary basis.
HOMICIDAL PATIENTS

- Studies have not determined “high-risk” features of who is at current risk for homicide
- The most reliable predictor of future violence is a history of violent behavior
- Intoxication increases the risk for violent behavior
  - These patients should not be discharged until they are clinically sober and able to undergo a repeat interview to assess risk
HOMICIDAL PATIENTS

- Need for hospitalization depends upon the potential therapeutic benefit to the patient
  - Pts with homicidality related to schizophrenia/bipolar disorder are likely to be admitted
  - Other patients may be provided outpatient resources if no underlying cause that needs inpatient treatment
  - Depends upon jurisdiction; some states require commitment because of danger to others
Important to exclude organic causes in patients who present with acute psychosis

Low threshold is recommended for psychiatric consultation/admission in these patients
**O’Connor v Donaldson 1975:** Supreme Court ruled that mental illness alone cannot justify confinement against a person’s will. A patient must meet all six of the following to be eligible for civil commitment:

- Mental illness
- Danger to self or others
- Refusal to consent
- Treatability
- Lack the capacity to make treatment decisions
- Hospitalization is the least restrictive treatment
IN Voluntary Hospitalization

- To commit a patient, the physician has to complete an initial certification form.
- The patient is then held for up to 72 hours in a psychiatric facility until a hearing for involuntary hospitalization is held, or the patient is allowed to leave.
- Slight variations state to state.
Always a good idea to see if a patient can be managed with verbal or behavioral methods:

- 1:1 observation
- Verbal intervention
- Quiet room
- Diversionary activity: food, drink, TV, etc.

If this doesn’t work, chemical restraint is preferable to physical restraint
Caution:

- In patients with medical illness causing psychiatric symptoms
  - These patients need their underlying disease managed
- In patients with agitation related to drug ingestions or poisonings
  - Antipsychotics in the setting of anticholinergic or sympathomimetic agents can exacerbate agitation because of their anticholinergic side effects
BENZODIAPINES
Conventional Antipsychotics
Atypical Antipsychotics
Multiple studies show BZD are at least as effective as haloperidol.

Probably superior in sympathomimetic intoxication.

Most studies evaluate either 2mg or 4mg lorazepam.

Nobay: IM midazolam 5mg has a shorter onset to sedation (18 min) than lorazepam (32 min) or haloperidol (28 min) and shorter time to arousal.

Combination of haloperidol and lorazepam may be superior to either drug alone, but studies are flawed.

Haloperidol:
- >20 double blinded studies since 1973: very safe, very effective
- Dose 2.5-10 mg IM; can be repeated in 30-60 min.

Again, combination of haloperidol and lorazepam may be more effective than either drug alone
CONVENTIONAL ANTIPSYCHOTICS

- **Droperidol:**
  - Thomas 1992: Superior to haloperidol in one study comparing haloperidol 5mg IM to droperidol 5mg IM
  - Resnick 1984: fewer repeat doses droperidol required than with equivalent dose of haloperidol

Black Box Warning about potential for dysrhythmia in droperidol

However, two large patient series have attested to droperidol’s safety
- Chase: 2468 pts receiving droperidol (1357 for agitation), no dysrhythmias
- Shale: 12,000 patients treated with droperidol for violence and/or agitation, no dysrhythmias

No evidence that the drug causes severe cardiac events

These inhibit both dopamine and serotonin receptors

- Tranquilization, rather than sedation
- Lower incidence of EPS
Ziprasidone (Geodon):

- Dose 20 mg IM
- Two studies show that ziprasidone is effective in rapidly reducing acute agitation in patients with known psychotic disorders.
- No associated movement disorders/EPS/dystonia found
Olanzapine (Zyprexa) IM: found to be equivalent to haloperidol, with less dystonia
- Dose 5-10 mg IM or 5-10 mg ODT
- Similar effectiveness to other agents
- Can induce HYPOTENSION (11% had 20 mmHG drop in SBP during clinical trials)
- Concomitant use of olanzapine and BZD has not been studied and is not recommended by the manufacturer
Risperidone:
- Currier 2004: risperidone 2mg PO and lorazepam 2mg PO was comparable to haloperidol 5mg IM and lorazepam 2mg IM
- ODT formulation

Level B recommendations:

- Use a BZD (lorazepam or midazolam) or a conventional antipsychotic (droperidol or haloperidol) as effective monotherapy for the initial drug treatment of the acutely agitated undifferentiated patient in the ED.
- If rapid sedation is required, consider droperidol instead of haloperidol.
- Use an antipsychotic (typical or atypical) as effective monotherapy for both management of agitation and initial drug therapy for the patient with known psychiatric illness for which antipsychotics are indicated.
- Use a combination of an oral BZD (lorazepam) and an oral antipsychotic (risperidone) for agitated but cooperative patients.

Level C recommendations:

- The combination of a parenteral BZD and haloperidol may produce more rapid sedation than monotherapy in the acutely agitated psychiatric patient in the ED.
QUESTIONS?