Medical Assessment of Patients with Psychiatric Symptoms

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Objectives

- Gain an appreciation for why medical evaluation is necessary
- Review real cases from ED
- Review relevant literature
- Overview of medical evaluation process

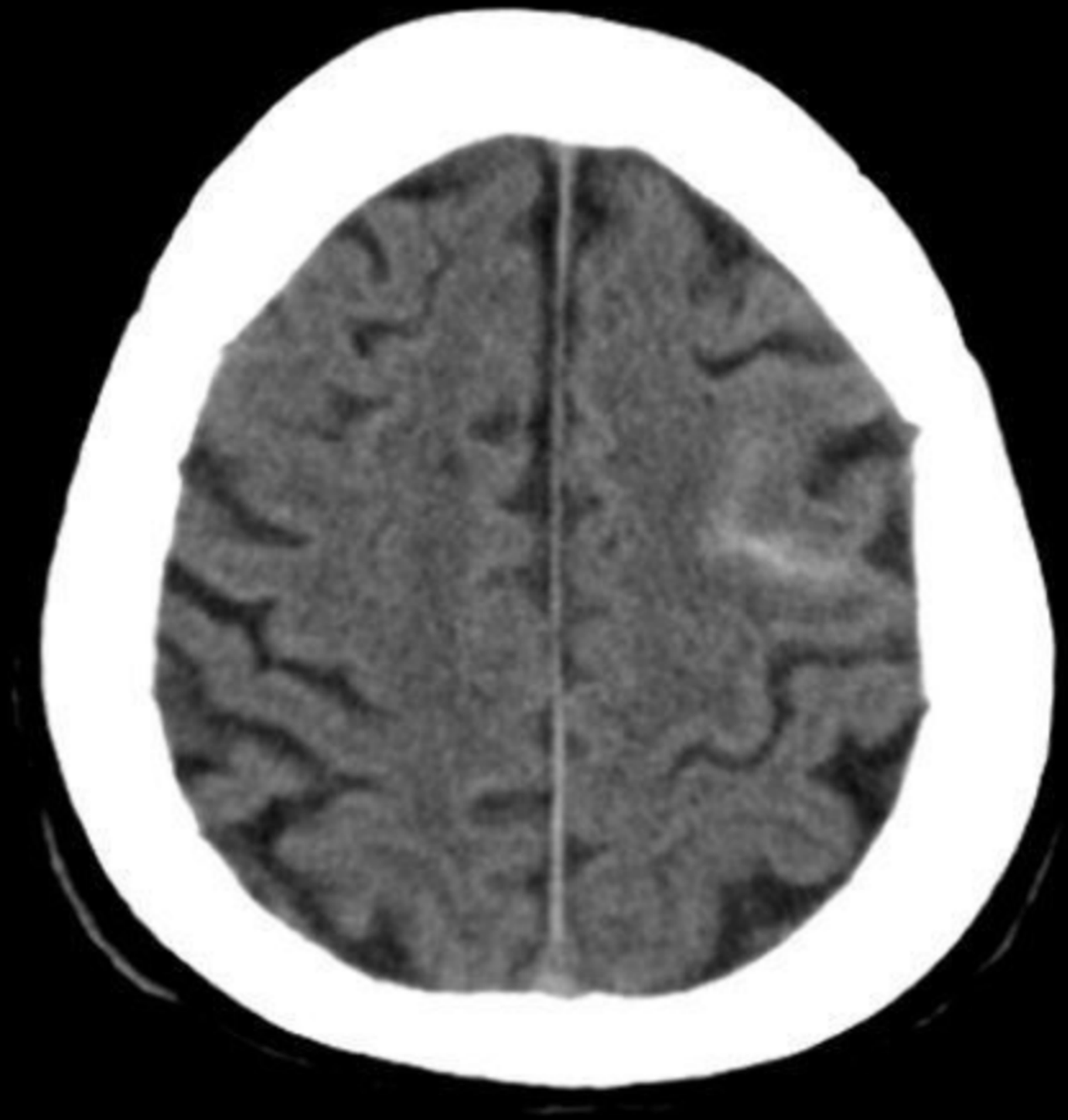
Why Bother?

- Medical illness commonly co-exists with psychiatric illness
- Medical illness can mimic psychiatric illness
- Psychiatric illness can exacerbate medical illness
- Substance abuse/withdrawal can confound both
- Overdose and intentional self harm

My dead husband is talking to me...

- 65 y/o lady, PhD in accounting
- c/o : “This morning my dead husband started talking to me”
- PMH: nil
- Review of systems: headache, otherwise (-ve)
- Vital signs: HR 50, BP 190/105, RR 16, Temp 36.6, SPO2 99% RA, Glucose 5.2
- Physical exam: Non contributory

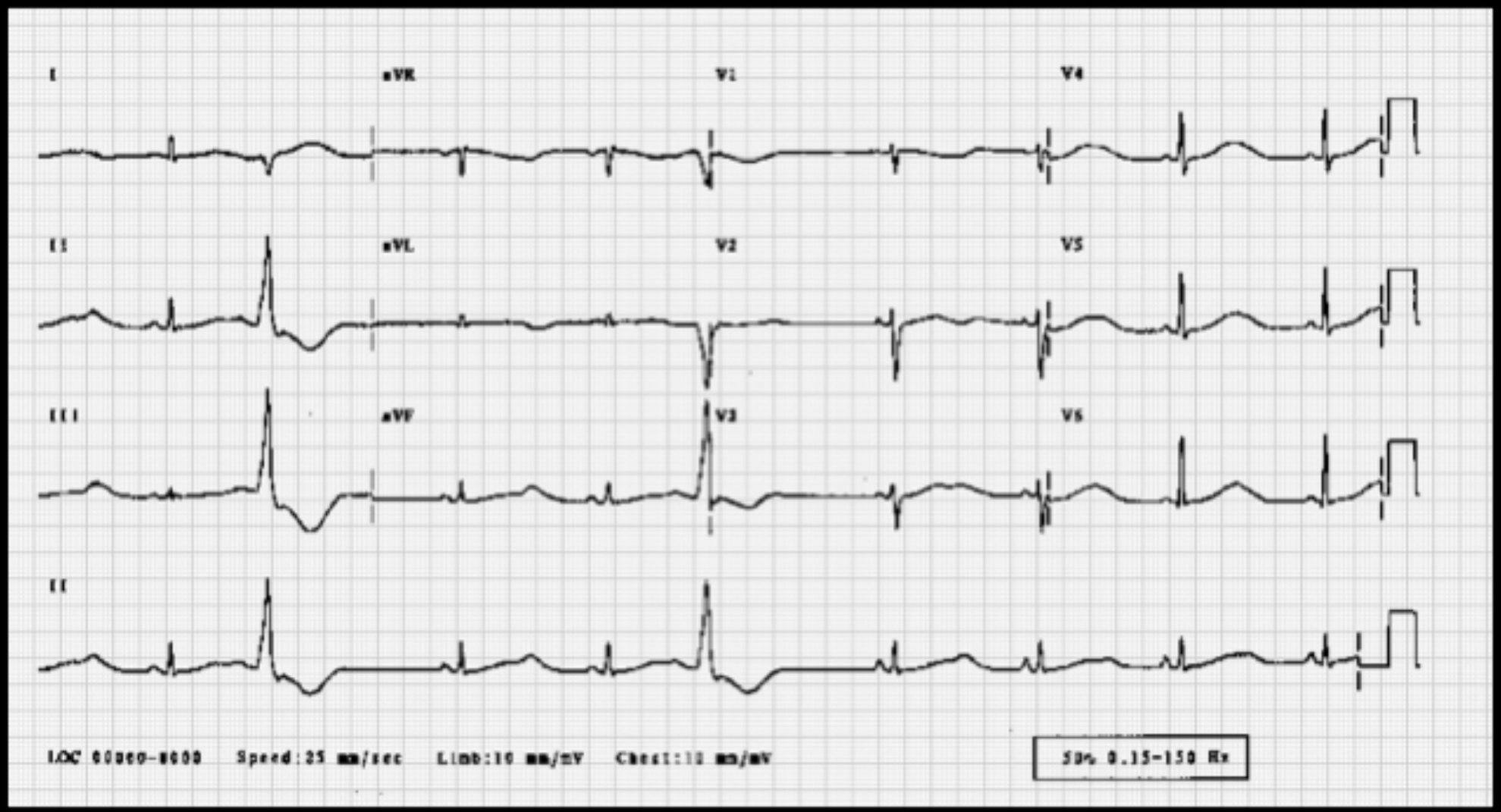
- Red Flags?
- How would you manage this patient?



The whining teenager...

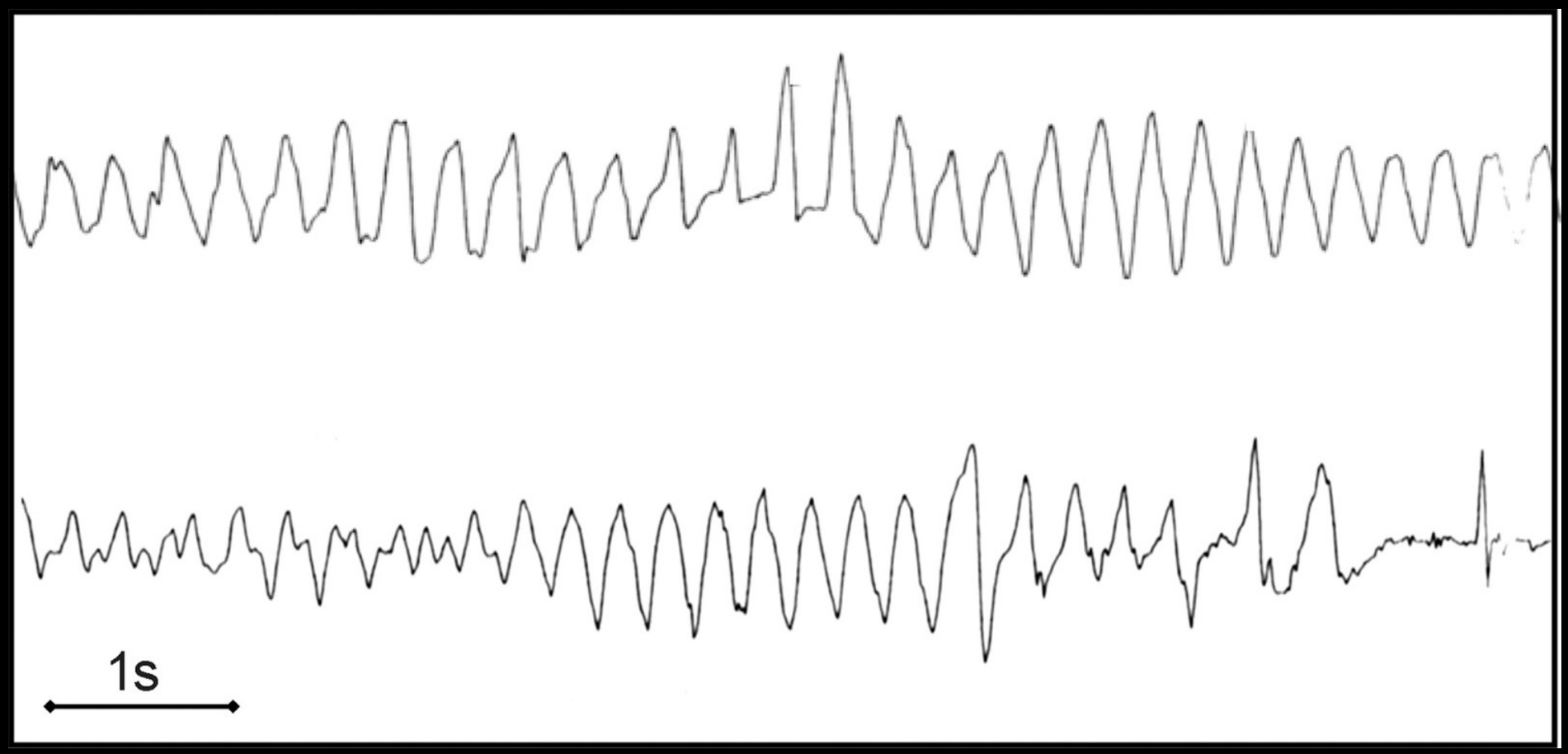
- 19 y/o male
- PMH: personality disorder, depression, anxiety
- C/O: “situational crisis”, went on alcohol and cocaine binge because he was fed up of living.
- Vitals: HR 110, BP 120/80, Temp 37, SpO2 99%
- O/E: emotionally upset, whining (complaining that wrist band hurts, yelling at mother to stop touching him, asking PESU nurses to stop assaulting him..)

- Red flags?
- How would you manage this patient?


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
II
LOC 00060-8000 Speed:25 mm/sec Limb:10 mm/mV Chest:10 mm/mV
50% 0.15-150 Hz

cont….

- Transferred out of PESU to monitored bed
- Trop: 11, CK 2500, creatinine 165, Mg 0.5
- 30 min later, I was called to bedside: patient unresponsive
- No pulse : CPR initiated, crash cart to bedside


1s

- Pt defibrillated => return of spontaneous circulation
- Given MgCl
- Admitted to CCU

The manic diabetic

- 32 y/o lady
- Bipolar, TBI, postpartum psychosis
- IDDM on insulin pump
- Recent diagnosis of “bronchitis” treated with bronchodilators, inhaled steroids, and clarithromycin
- Presents with paranoia, irritability, lack of sleep, increased spending
- Pulled out insulin pump 24 hrs earlier..
- Required ongoing management of brittle DM and manic episode

Medical Conditions that Mimic ψ illness

- Metabolic disorders
  - Hypercalcemia
  - Hypercarbia
  - Hypoglycemia
  - Hyponatremia
  - Hypoxia

Medical Conditions that Mimic ψ illness

- Inflammatory disorders
  - Sarcoidosis
  - Systemic lupus erythematosus
  - Temporal (giant cell) arteritis
- Organ failure
  - Hepatic encephalopathy
  - Uremia

Medical Conditions that Mimic ψ illness

- Neurologic disorders:
  - Alzheimer's disease
  - Cerebrovascular disease
  - Encephalitis (including HIV)
  - Encephalopathies
  - Epilepsy
  - Huntington's disease
  - Multiple sclerosis
  - Neoplasms
  - Normal-pressure hydrocephalus
  - Parkinson's diseas
  - Pick's disease
  - Wilson's disease

Medical Conditions that Mimic ψ illness

- Endocrine disorders:
  - Addison's disease
  - Cushing's disease
  - Panhypopituitarism
  - Parathyroid disease
  - Postpartum
  - psychosis
  - Recurrent menstrual psychosis
  - Sydenham's chorea
  - Thyroid disease

Medical Conditions that Mimic ψ illness

- Deficiency states
  - Niacin
  - Thiamine
  - Vitamin B12 and folate

Medical Conditions that Mimic ψ illness

- Drug induced:
  - Antibiotics
  - Anticonvulsants
  - Antidepressants
  - Cardiovascular
  - Antihistamines
  - Steroids
  - Heavy metals
  - Anti-neoplastics
  - Drugs of abuse
  - Antianxiety agents
  - Many others!

Medical Conditions that Mimic ψ illness

- Infections (viral, bacterial, fungal and protozoal):
  - Meningitis
  - Encephalitis
  - Sepsis
  - UTI
  - Pneumonia

Medical “clearance”

- The historic goal of “medical clearance” was to categorize patients as having organic vs. functional causes for their symptoms
- It is impossible to rule out all medical conditions that could mimic psychiatric illness within the course of an ED visit
- The term “medically clear” is inaccurate, misleading, and is an example of poor communication and documentation
- Focussed medical assessment (FMA) is the preferred term and is endorsed by the American Association of Emergency Physicians (ACEP)

Focussed Medical Assessment

The role of the ED physician is to:

- Determine with reasonable certainty wether the patient's ψ symptoms could be caused by a medical condition that, unless identified, could place the patient at risk if admitted to a psychiatric ward rather than a medical ward
- To initiate treatment for medical conditions that can co-exist with or exacerbate the patient's ψ illness

This involves a high degree of clinical judgment

Relevant Literature

- 100 consecutive patients admitted to a psychiatric ward with new psych symptoms
- Patients were "screened" for medical illness prior to admission
- 46% had unrecognized medical illness that either caused or exacerbated their ψ illness
- A workup consisting of physical and psychiatric examination, biochemistry, U/A, tox screen, ECG, and sleep deprived EEG identified 90% of those illnesses

Hall RC, Gardner ER, Popkin MK, et al. Unrecognized physical illness prompting psychiatric admission: a prospective study. Am J Psychiatry 1981;138:629–35

Limitations

- No description of what the "screening" constituted ? Vital sign abnormalities?
- Screening was done by general practitioners (? what was their level of training)
- Selection bias (admitted patients, no known ψ Hx, brought in by police)
- Determination of the contribution of the medical illness to the ψ symptoms totally arbitrary (e.g. MSK conditions, abnormal pap smear)

Relevant Literature

- 100 consecutive patients presenting to ED with new ψ symptoms
- Extensive evaluation including history, physical exam, comprehensive lab, CT, lumbar puncture, tox screen (variably done)
- 63% were found to have an medical etiology for their symptoms
- Author's conclusion was that extensive testing is necessary

Henneman PL, Mendoza R, Lewis RJ. Prospective evaluation of emergency department medical clearance. Ann Emerg Med. 1994; 24:672-677.

Limitations

- Excluded patients known to have psychiatric symptoms
- Included many patients with delirium
- 40 % of patients had abnormal vital signs
- 60% had altered mental status on presentation (confusion, fluctuating level of consciousness).
- The varying approach to testing (e.g. LP) indicates that there must have been an indication to do the test.

Relevant Literature

- 212 ED patients referred to ψ
- All had routine Hx, Px, labs, tox screen, BhCG, CXR
- 132 (62%) had medical complaints identified on Hx which required further evaluation and treatment.

Korn CS, Currier GW, Henderson SO. "Medical clearance" of psychiatric patients without medical complaints in the Emergency Department. J Emerg Med. 2000;18:173-176.

Relevant Literature

- The remaining 80 patients (38%) had isolated ψ complaints, previous ψ Hx, and normal vitals and physical exam
- For these patients, all screening labs and imaging tests were normal (except for 1 preg test which did not change management)
- Routine labs and imaging in patients with known ψ illness in the absence of medical complaints or abnormal exam are not warranted

Korn CS, Currier GW, Henderson SO. "Medical clearance" of psychiatric patients without medical complaints in the Emergency Department. J Emerg Med. 2000;18:173-176.

Relevant Literature

- 352 ED patients with ψ chief complaints
- All were asked about ETOH and drug use
- All had labs, urine/blood drug screen, and blood ETOH level
- Patients correctly self reported ETOH 95% of the time
- Patients correctly self reported drug use 91% of the time

Olshaker JS, Browne B, Jerrard DA, et al. Medical clearance and screening of psychiatric patients in the emergency department. Acad Emerg Med. 1997;4:124-128

Relevant Literature

- 65 of the 352 (19%) had an acute medical condition requiring treatment
- Of these Hx identified 94% , Physical exam 51%, vital signs 17%
- only 4 patients had medical conditions that were not identified by Hx , of these 2 had abnormal physical exam and the remaining 2 had abnormal basic labs (mild hypokalemia)

Olshaker JS, Browne B, Jerrard DA, et al. Medical clearance and screening of psychiatric patients in the emergency department. Acad Emerg Med. 1997;4:124-128

Relevant Literature

- Prospective study of 598 thought by ED physician to have a primarily psychiatric condition
- ED physicians ordered lab tests on 155 patients (26%) based on Hx and Px prior to clearance
- Psychiatry asked for lab/radiology tests for 191 of 434 patients (44.0%) who emergency physicians determined did not require ancillary testing
- Only one patient of the 191 (0.5%) had a result that changed disposition (got admitted to medicine for acetaminophen overdose).
- The cost of the additional tests ordered by psychiatry for the 191 patients was $37,682.

Parmar P, Goolsby CA, Udompanyanan K, et al. Value of mandatory screening studies in emergency department patients cleared for psychiatric admission. West J Emerg Med. 2012;13:388-393.

If it's so obvious, why do we sometimes get it wrong?

Relevant Literature

- 64 patients with unrecognized medical emergencies inappropriately admitted to psychiatric units from ED
- All had altered mental status
- 67% had a previously diagnosed mental illness
- Most commonly missed diagnoses were ETOH or drug intoxication (34.4%), Withdrawal (12.5%) and prescription drug overdose (12.5%).

Reeves RR, Pendarvis EJ, Kimble R. Unrecognized medical emergen- cies admitted in psychiatric units. Am J Emerg Med 2000;18:390–3.

Relevant Literature

- Contributing factors:
  - Failure to do an MSE (100%)
  - Inadequate physical exam (43.8%)
  - Failure to obtain indicated labs (34.4%)
  - Failure to obtain available history (34.4%)

ACEP Clinical Policy: Critical Issues in the Diagnosis and Management of the Adult Psychiatric Patient in the Emergency Department

"In adult ED patients with primary psychiatric complaints, diagnostic evaluation should be directed by the history and physical examination. Routine laboratory testing of all patients is of very low yield and need not be performed as part of the ED assessment"

Level B recommendation

1. Lukens TW, Wolf SJ, Edlow JA, et al. Clinical policy: critical issues in the diagnosis and management of the adult psychiatric patient in the emergency department. Ann Emerg Med. 2006;47:79-99.

Components of FMA

- History
- Physical exam
- Focussed lab investigation as determined by above
- Observation as determined by above

Physical Exam

- Vitals, vitals, vitals
- Inspection: diaphoresis, skin colour, odours, pattern of speech, personal hygiene, gait and movement
- Head to toe exam (signs of trauma, toxidromes, neuro deficits)

Table 1
Clinical factors that help differentiate delirium from psychiatric disease

Characteristic	Delirium	Psychiatric Illness
Age	<12 y or >40 y	13–40 y
Onset	Acute	Acute
Course	Fluctuation	Constant
Past medical history	Substance abuse, medical illness	Previous psychiatric history
Family history		Family history of psychiatric illness
Affect	Emotional lability	Flat affect
Vital signs	Usually abnormal	Usually normal
Orientation	Usually impaired	Rarely impaired
Attention	Impaired	Disorganized
Hallucinations	Primarily visual	Primarily auditory
Speech	Slow, incoherent, dysarthric	Usually coherent
Consciousness	Decreased	Alert

Data from Williams ER, Shepherd SM. Medical clearance of psychiatric patients. Emerg Med Clin North Am 2000;18:185–98.

Lab Investigation

Labs indicated for patients with :

- new onset psychiatric illness

- patients with medical complaints or physical exam abnormalities

- patients with features suggestive of medical cause

- High risk patient populations (elderly, homeless, significant comorbidities, substance abuse, malnutrition)

Tox Screen

- Tests only available for a limited number of drugs
- False positives common
- False negatives common
- Lack of temporal correlation with presentation
- Does not change medical management in the vast majority of patients
- Expensive and time consuming

Tox Screen

- Survey of 500 emergency physicians
- 86% stated that routine tox screening was mandated by their psychiatry departments
- Less than half felt that these tests were warranted

Broderick KB, Lerner EB, McCourt JD, et al. Emergency physician practices and requirements regarding the medical screening examination of psychiatric patients. Acad Emerg Med. 2002;9: 88-92.

Tox Screen

- 110 patients evaluated in ED with urine/serum tox screen
- ED physician asked to provide management decision prior to being shown test result
- None changed the management after they were made aware of the result

Eisen JS, Sivilotti MLA, Boyd KU, et al. Screening urine for drugs of abuse in the emergency department: do tests results affect physicians' patient care decisions. Can J Emerg Med. 2004;6: 104-111

Tox Screen

- Blinded RCT of 392 patients from urban psychiatric emergency service
- Routine tox screen vs. selective testing based on psychiatrist's clinical judgement
- Mandatory testing results in ≈ 30% increase in number of tests ordered
- No difference in disposition was found between the mandatory-screen group and the usual-care group.
- Survival analysis did not reveal a difference between the two groups in length of stay in inpatient psychiatric units
- Results do not support routine testing practice

Schiller MJ, Shumway M, Batki SL. Utility of routine drug screening in a psychiatric emergency setting. Psychiatr Serv. 2000;51:474-47

ACEP Clinical Policy: Critical Issues in the Diagnosis and Management of the Adult Psychiatric Patient in the Emergency Department

1. Routine urine toxicologic screens for drugs of abuse in alert, awake, cooperative patients do not affect ED management and need not be performed as part of the ED assessment.

2. 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.

Level C recommendation

1. Lukens TW, Wolf SJ, Edlow JA, et al. Clinical policy: critical issues in the diagnosis and management of the adult psychiatric patient in the emergency department. Ann Emerg Med. 2006;47:79-99.

UHN PESU Model

- No mandatory protocols for lab/imaging
- Early involvement of psych nurse and psych clinician prior to ED physician assessment
- 6 hour window for ED physician engagement post consultation: joint responsibility
- Multi-disciplinary approach to patient care and a negotiated strategy between emerg and psych with no refusal of consultation from either team

Take Home Messages

- Medical and psychiatric conditions overlap & frequently co-exist in the same patient
- Comprehensive medical “clearance” is impossible… a focused screening implies short term medical stability
- Patients’ self reported medical symptoms should always be addressed even in patients with known or apparent ψ illness

Take Home Messages

- A detailed history and thorough physical exam with close attention to vital signs are critical for appropriate screening and disposition of ED patients
- Routine lab testing is not warranted. A focussed approach guided by history and physical exam should be employed

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