



Evidence Based Evaluation of Psychiatric Patients

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Case 1

A 21-year-old male presents to the ED with violent behavior at home. The patient has a past history of psychiatric disorder – schizophrenia. There has been similar presentation in the past. The patient has no physical complaints. The patient denies recent drug or alcohol use.

The physical exam reveals normal vital signs. The physical examination was unremarkable. There is no evidence of intoxication. The mental status examination reveals that the patient appears psychotic but denies suicidal or homicidal ideation. He states that he has no hallucinations with poor insight and judgment.

Case #2

The patient is 58-year-old male presents with bizarre behavior at home. The patient's past medical history was remarkable for hypertension, seizures and alcoholism. The patient takes Catapres and dilantin. The family states the patient does not recently use alcohol or drugs. The patient and family state that the patient does not have any psychiatric history or prior similar events.

The physical examination demonstrates a pulse 112, blood pressure 203/108, respiratory rate of 20 and temperature 100.6F. The patient was alert and oriented in no acute distress. The head, eyes, ears, nose and throat were normal. The lungs were clear and the heart showed normal S1S2. The abdomen was soft with normal breath sounds and the neurologic exam was non-focal. The patient admits to auditory hallucinations but no suicidal or homicidal ideation.

Key Questions

What is the appropriate evaluation of the patient?

What laboratories and radiographs do the patient need?

Introduction

“Medical clearance” of psychiatric patients is the initial medical evaluation of patients in the emergency department (ED) whose symptoms appear to be psychiatric in origin in order to determine whether serious underlying medical illness exists which would render admission to a psychiatric facility unsafe or inappropriate. Studies of the number of patients who have medical problems that have caused or contributed to their psychiatric conditions varies from 15-90%, many of these problems were not identified in the emergency department [1-13]. The process of medical clearance in the ED has not been standardized and is commonly fraught with problems [14].

The first reason to perform the medical clearance of the psychiatric patients is to differentiate organic illnesses from functional disorders. The process to make this differentiation is not usually an easy one. The role of emergency physicians is to determine if the psychiatric presentation of a patient could be caused by a medical condition that, unless identified, could place the patient at risk if transferred to a psychiatric facility rather than a medical facility. In order to provide proper evaluation, it is absolutely essential that the emergency physician identify the causative factors for a patient’s psychiatric condition. Medications, drug and alcohol intoxication and withdrawal, infections, central nervous system disease, metabolic/endocrine conditions, and cardiopulmonary disease are common underlying causes for psychiatric symptomatology presenting in the emergency department [1-13]. If a medical condition is found to be the etiology of the problem, treatment in the ED or on a medical floor is indicated. New onset of psychiatric symptoms, fever, abnormal physical examination, focal lesions or changes in one’s usually mental status are keys to organicity and need further evaluation. No studies that could be found that differentiated patients into organic versus functional illness in the ED. The classic categorization of psychiatric illness as organic versus functional is not a particularly useful mechanism in differentiating patients in terms of those who need psychiatric intervention versus those who are ready for medical admission. . Many times this determination cannot be made in the emergency department, but only during an inpatient stay.

While it is imperative to identify medical conditions incidental to the psychiatric problem that may need treatment in the emergency department or in the psychiatric facility, no studies on this topic have been found. A growing number of psychiatric facilities are able to provide medical care for many of their patients’ co-morbid medical conditions [14]. Diabetes, simple fractures, wound care and upper respiratory infections are but a few of the medical illnesses that can be treated in modern psychiatric facilities.

Finally, it is important to identify medical conditions that do not require medical treatment in either the emergency department or at the psychiatric facility, but nevertheless need to be reported. Although these conditions may not require medical treatment, psychiatric facilities prefer to know about their existence so that proper accommodations can be made for the patient. For example, a missing or prosthetic limb may need special accommodation at a psychiatric facility. No studies were found that described this issue in the medical clearance process.

The components of the medical clearance process include history and physical exam, mental status examination, testing and treatment. A protocol for the emergency medicine evaluation of psychiatric patients was developed by a team of Illinois psychiatrists and emergency physicians to develop a consensus document in 1995 (Appendix #1). The purpose was to coordinate transfers to a State Operated Psychiatric Facility (SOF). It was based on services provided at an SOF: monitor vital signs, routine neurological monitoring, glucose finger sticks, fluid input and output, insertion and maintenance of urinary catheters, oxygen administration and suction, clinical laboratories, radiographic procedures, intramuscular and subcutaneous injections. The consensus document establishes the Emergency Physician (EP) as the decision maker if lab tests are clinically indicated. Instead of urine and alcohol drug screens, observation is the main means to determine if the presentation is from drugs/alcohol. The tool may be used for adults and children. The medical findings may or may not preclude transfer to a SOF. The checklist developed as a transfer document [15].

It is uncertain what type of mental status evaluation is performed by in the emergency department. One study evaluated the form of mental status examination performed by what emergency physicians. It was a random sample of 120 EPs in 1983. The study found that EPs use less than 5 minutes to perform the test (72%). The frequently used tests were level of consciousness 95%, orientation 87%, speech 80%, and behavior 76%. The majority perceived a need for and would use a short test of mental status (97%). EPs use selected, unvalidated pieces of a standard mental status examination [16].

They are numerous short tests of mental status that may be used in the ED: Mini-Mental State Exam, The Brief Mental Status Examination, Short Portable Mental Status Questionnaire and the Cognitive Capacity Screening Examination [17-20]. There was one study of the use of one of these tests in the emergency department. This study used the Brief Mental Status Examination in an inner city ED. The test was scored as 0-8 normal, 9-19 mildly impaired and 20-28 severely impaired. There were 100 randomly selected subjects and 100 subjects with indications for the exam. A chi-squared analysis of the physician analysis vs. tool demonstrated a 72% sensitivity and 95% specificity in identifying impaired individuals in the ED [21].

The literature varies on whether to test psychiatric patients who present to the emergency department. Hall and others found that 46% of psychiatric patients had unrecognized medical illness [6]. Bunce found that 92% of one or more previously undiagnosed physical diseases [3]. Koranyi 43% of psychiatric clinic patients had one or several physical illnesses [9].

The most convincing study for testing was done by Hennenman and others where they evaluated 100 consecutive patients aged 16-65 with new psychiatric symptoms [21]. They found that 63 of 100 had organic etiology for their symptoms based on history, physical exam, SMA-7, drug screen, CT scan and LP. They recommended that patients with new onset of psychiatric symptoms need an extensive laboratory and radiographic evaluations including CT and LP.

Allen and others found that most laboratories, EKG and radiographic testing should be abandoned in favor of a more clinically driven and cost effective process [22]. Korn and others found that patients with primary psychiatric complaints with other negative findings do not need ancillary testing in the ED [23]. Olshaker and others found that medical and substance abuse problems could be identified by initial vital signs together with a basic history and physical examination. They stated that universal laboratory and toxicologic screening is of low yield [24].

Once the psychiatric patients has been “medically cleared”, a disposition decision to admit, observation, discharge or transfer is made. The absolute indications to admit psychiatric patients are suicidal or homicidal potential or the inability to care for oneself. No studies could be found in the literature on the incidence or disposition of psychiatric patients with behavioral complaints in the ED. However, one study investigated the concurrence of EPs and psychiatrists for patient disposition [25]. The reasons for evaluation of 156 patients evaluated included disruptive behavior (28%), overdose (24%) and danger to self (23%). They found that 6.3% needed medical treatment, 3.7% needed outpatient treatment and 55.7% admitted. EPs and Psych agreement was based on danger to self ($k=0.44$), danger to others ($k=0.40$) or need for psych hospitalization ($k=0.54$).

One study examined the characteristics of patients with recurrent psychiatric admissions. They found that frequent psychiatric admissions occur in schizophrenia, young, unmarried, African-American, male and without co morbid substance abuse [26]. On the other hand, the criterion for observation includes intoxicated patients, patients who have overdoses but who do not require immediate admission, mute patients, patients receiving treatment for active medical problems but do not meet admission criteria and patients in need of social service intervention [27]. It is yet to be seen if psychiatric patients who used to be admitted can be given psychiatric medications in the emergency department and send home. One study on a psychiatric floor recommends the use of rapid neuroleptization [28]. Anderson and others examined 24 psychotic patients given 15-45 mg of haloperidol over three hours and found 11 patients had complete remission of symptoms. Outpatient management may be feasible and preferred in the treatment of acute psychotic episodes

Emergency physicians frequently transfer psychiatric patients from EDs to psychiatric facilities. Studies examining the type and reason for transfer are not documented in the literature. However, it is known that COBRA violations secondary to psychiatric transfers have occurred [29]. Justifiably, emergency physicians are frequently concerned about EMTALA requirements to transfer psychiatric patients from the ED. EMTALA

does not require the patient to have laboratories or radiographies performed to ensure medical stability. It does require that psychiatric patients with medical problems are transferred to a psychiatric facility that is equipped to handle the patients' medical problem [30].

Proper information needs to be transmitted to the psychiatric consultants. Tintinilli and others found that there was poor documentation of medical examination of psychiatric patients of 298 charts reviewed in 1991 at one hospital. She found that there were triage deficiencies of mental status in 56% and physician deficiencies in cranial nerves 45%, motor function 38%, extremities 27%, mental status 20% of the charts. The term "medically clear" was documented in 80%. Tintinalli states the term "medically clear" should be replaced by discharge note that contains a history and physical examination, mental status and neurologic exam, laboratory results, discharge instructions and follow up plans [31]. It is felt that the term "medically clear" has greater capacity to mislead than to inform correctly. Weissberg states that there are concerns about misdiagnosis, premature referral and misunderstandings. He recommends education and process factors to resolve the problem [32].

ED Process

Case #1

The patient received a through history, physical examination and mental status examination. No further laboratories were indicated. The patient was given Haldol 10 mg and Cogentin 2.5 mg p.o. in the ED. He was transferred to a psychiatric hospital with the diagnosis of schizophrenia.

ED Process

Case #2

The patient received CBC, CMP, UA, dilantin level, head CT and lumbar puncture. The dilantin level was 1.0. The patient's CT and LP were negative. The patient was loaded with Dilantin and admitted for 23 hours of observation. The diagnosis was alcohol withdrawal syndrome.

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Take Home Point

- Medical Clearance process needs better definition or use of a protocol
- Short mental status exams better than current process
- Test patients with new onset on psychiatric illness

Annotated Bibliography

Hoge, ST, Appelbaum, PS, Lawlor, T, et. Al: A prospective, multicenter study of patients' refusal of antipsychotic medication. Arch Gen Psych 1990; 47:949-956.

A Prospective study of the refusal of treatment with antipsychotic agents with a sample of 1434 psychiatric patients at 4 acute inpatient units. 103 of 1434 refused (9.3%) oral meds. They found that most patients will assent to oral medication (>90%).

Binder, RL, McNeal, DE: Contemporary practices in managing acutely violent patients in 20 psychiatric emergency rooms Psych Services 1999; 50:1553-1556.

A survey of 20 Psychiatric Medical Directors from Association for Emergency Psychiatry. 17 of 20 state that it is very difficult to determine the etiology of violent behavior 14 of 20 said the protocol was to physical restrain patients and medicate them prior to a medical work-up. 15 of 20 stated that IM was the most common route. 11 of 20 used Haldol plus lorazepam with or without benztropine IM.

Clinton, JE, Sterner, S, Stelmachers, Z, Ruiz, E: Haloperidol for sedation of disruptive patients in the emergency patients. Ann Emerg Med 1987;16:3219-322.

Administered to 136 patients to control behavior. 18 received during resuscitation, 48 for mental health, 90 intoxicated and 23 with head trauma. IM in 110, IV in 19 and oral in 7. Disruptive behavior eliminated in 30 minutes in 83%. 15% were suboptimal, no effect in 3. They had 4 complications including hypotension.

Thomas, H, Schwartz, E, Petrilli, R: Droperidol versus haloperidol for chemical restraint of agitated and combative patients. Ann Emerg Med 1992; 21:407-413.

33 patients got haloperidol and 35 droperidol. IM droperidol decreased combativeness significantly more than IM haloperidol at 10 (p=.01) and 30 minutes (p=.04). IV no significant difference between the two drug. Sedation was not studied. Hypotension found with equal doses of both drugs in 8 patients.

Chase, PB, Biros, MH: A retrospective review of the use and safety of droperidol in a large, high-risk, inner-city emergency department patient population Acad Emerg Med 2002;9:1402-1410.

Retrospective chart review of 2,468 patients enrolled in 1998. Minor AEs were found to be 96 transient hypotension and 40 dystonic reactions. Serious AEs included 2 respiratory depression, 3 seizures and 1 cardiac arrest.

Zun, LS and Howes, DS: The Mental status examination: Applications for the emergency department, Am J Emerg Med,6:165-172, 1988.

The formal mental status includes appearance, behavior and attitude, disorders of thought, disorders of perception, disorder of perception, mood and affect, insight and judgment and sensorium and intelligence.

Broderick, KB, Lerner, B, McCourt, JD, et. al: Emergency physician practices and requirements regarding the medical screening examination of psychiatric patients. Acad Emerg Med 2002;9:98-92.

Surveyed 290 EPs. They found that 35% performed routine testing and 16% was required by ED protocol and 84% by the psychiatrist or psychiatric institution.

Allen, MH, Currier, GW, Hughes, DH, Reyes, Harde, M, Docherty, JP: Treatment of behavioral emergencies. Post grad Med 2001; S1-88.

This article is an extensive consensus review of all aspects of treatment of the psychiatric patient in the emergency department. It is a consensus of emergency psychiatrists based on a survey tool without input of emergency physicians.

Questions

1. **What information is preferred to use of the term “medically clear”?**
 - A) Discharge note
 - B) Medically stable
 - C) A complete copy of the chart
 - D) A & B
 - E) A, B, C
 - F) None of the above

2. **Which psychiatric patients may need extensive testing in the emergency department?**
 - A) New onset of psychiatric symptoms
 - B) Patients without fever
 - C) Same presentation as usual
 - D) A, B, C
 - F) All of the above

3. **Based on recent data, what is the most frequent complication of physical restraints?**
 - A) Getting out
 - B) Injured others
 - C) Vomiting
 - D) Injured self
 - E) None of the above

4. **What short test of mental status has been tested in the emergency department?**
 - A) Mini-Mental State Exam,
 - B) The Brief Mental Status Examination
 - C) Short Portable Mental Status Questionnaire
 - D) Brief Mental Status Examination
 - E) Cognitive Capacity Screening Examination

Answers

1. A.

According to Tintinilli's article on medical clearance process.. The article states that the best means to communicate the narrative of evaluation of the patient that includes a history and physical examination, mental status and neurologic exam, laboratory results, discharge instructions and follow up plans.

Tintinelli, JE, Peacock, FW, Wright, MA: Emergency medical evaluation psychiatric patients. Ann Emerg Med 1994; 23:859-862.

2. B.

Based on Henneman's article, patients with a new presentation of psychiatric symptoms need extensive evaluation that may include a CT Scan and LP.

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

3. A.

Getting out of restraints based on the recent study done by Zun. The other complications include getting out of restraints (6), injured others (2), vomiting (1), injured self (1), other (1), hostile or increased agitation (1).

Zun, LS: Complications of Patient Restraints, J Emerg Med 2003; 24:119-124.

4. C.

The correct answer is d. The Brief Mental Status Examination was used by Kaufman and Zun on a random sample of random and indicated patients. The test had a reasonable sensitivity and specificity to the "gold standard", EP's evaluation of cognitive function. No other test had been tested, nor validated in the acute care setting,

Kaufman, DM, and Zun, LS: A Quantifiable, brief mental status examination for emergency patients: J Emerg Med, 13:449-456, 1995.

Appendix #1

Medical Clearance Checklist

Patient's name _____ Race _____
Date _____ Date of birth _____
Gender _____ Institution _____

- | | Yes | No |
|--|--------------------------|--------------------------|
| 1. Does the patient have new psychiatric condition? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Any history of active medical illness needing evaluation? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Any abnormal vital signs prior to transfer | <input type="checkbox"/> | <input type="checkbox"/> |
| Temperature >101°F | | |
| Pulse outside of 50 to 120 beats/min | | |
| Blood pressure <90 systolic or >200; >120 diastolic | | |
| Respiratory rate >24 breaths/min | | |
| (For a pediatric patient, vital signs indices outside
the normal range for his/her age and sex) | | |
| 4. Any abnormal physical exam (unclothed) | <input type="checkbox"/> | <input type="checkbox"/> |
| a. Absence of significant part of body, eg, limb | | |
| b. Acute and chronic trauma (including signs of victimization/abuse) | | |
| c. Breath sounds | | |
| d. Cardiac dysrhythmia, murmurs | | |
| e. Skin and vascular signs: diaphoresis, pallor, cyanosis, edema | | |
| f. Abdominal distention, bowel sounds | | |

g. Neurological with particular focus on:

- i. ataxia
- ii. pupil symmetry, size
- iii. nystagmus
- iv. paralysis
- v. meningeal signs
- vi. Reflexes

5. Any abnormal mental status indicating medical illness such as lethargic, stuporous, comatose, spontaneously fluctuating mental status?

If no to all of the above questions, no further evaluation is necessary. Go to question #9

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

6. Were any labs done?

What lab tests were performed? _____

What were the results? _____

Possibility of pregnancy?

What were the results? _____

7. Were X-rays performed?

What kind of x-rays performed? _____

What were the results? _____

8. Was there any medical treatment needed by the patient prior to medical clearance?

What treatment? _____

9. Has the patient been medically cleared in the ED?

10. Any acute medical condition that was adequately treated in the emergency department that allows transfer to a state operated psychiatric facility (SOF)?

What treatment? _____

11. Current medications and last administered? _____

12. Diagnoses: Psychiatric _____

Medical _____

Substance abuse _____

13. Medical follow-up or treatment required on psych floor or at SOF: _

14. 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