

# Confused and nearly naked after going on spending sprees

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## How would you handle this case?

Answer the **challenge questions** throughout this article

Mr. A, age 68, goes on spending sprees and exhibits delusions and auditory hallucinations. Neurocognitive testing reveals severe dysfunction. What could be causing his symptoms?

### **CASE** Nearly naked

Mr. A, age 68, is found sitting in his car, wearing only a jacket, underpants, and boots. He speaks of spreading a message about Osama bin Laden and “taking a census.” Police officers bring him to a hospital emergency department for evaluation.

The examining clinician determines that Mr. A is a danger to himself and others because of mental illness, leading to admission to our state psychiatric hospital.

Mr. A's wife describes recent spending sprees with large purchases. She had obtained a restraining order against her husband because of his threatening remarks and behaviors. Within days of the order issuance, he got a home equity loan and purchased a \$300,000 house.

The medical history is notable for type 2 diabetes mellitus. Although he is not taking medications, his blood sugar is well controlled. Other than an initial resting heart rate of 116 beats per minute, vital signs are stable and within normal limits. Physical examination is unremarkable. Screening laboratory studies are notable for mildly elevated hepatic function, which approaches normal range several days after admission.

Mr. A reports a remote history of alcohol abuse but says he had not been drinking recently, and does not detail his pattern of

use. Urine toxicology screen is negative for all substances of abuse.

Mental status examination reveals disheveled appearance, motor agitation, pressured speech, labile affect, loosening of associations, grandiose delusions, and auditory hallucinations. Mr. A's thought processes are grossly disorganized, such that we could not gather a meaningful history. He believes God is speaking directly to him about plans to build a carousel at Disney World. He makes strange gestures with his hands throughout the interview, as if attempting to trace the shapes of letters and numbers. He frequently speaks of seeing an array of colors. Cognitive examination reveals a score of 5 of 30 on the Montreal Cognitive Assessment (**Figure 1**), indicating a severe impairment in neurocognitive functioning. He demonstrates limited insight and markedly impaired judgment, and denies having a mental illness.

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#### **Disclosure**

The authors report no financial relationships with any company whose products are mentioned in this article or with manufacturers of competing products.

Figure 1

Mr. A's Montreal Cognitive Assessment at admission

MONTREAL COGNITIVE ASSESSMENT (MOCA)  
Version 7.3 Alternative Version

NAME: 9/10/11 AM  
Education: DATE:  
Sex: DATE:

<b>VISUOSPATIAL / EXECUTIVE</b>		Copy cylinder		Draw CLOCK with numbers (3 points)		POINTS		
[ ]		[ ]		[ ]			0/5	
<b>NAMING</b>		BOY BOFFLE DR.		KANGAROO		POINTS		
[ ]		[ ]		[ ]			1/3	
<b>MEMORY</b>		TRAIN	EGG	HAT	CHAIR	BLUE	No points	
1st trial		[ ]	[ ]	[ ]	[ ]	[ ]		0/5
<b>ATTENTION</b>		Read list of digits (1 digit/ sec). Subject has to repeat them in the forward order [ ] 5 4 1 8 7		Subject has to repeat them in the backward order [ ] 7 4 1 8 5		POINTS		
[ ]		[ ]		[ ]			1/2	
Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors		[ ] FBACMNAAJKLBAFAKDEAAAJAMOF AAB		[ ]		POINTS		
[ ]		[ ]		[ ]			0/1	
Serial 7 subtraction starting at 80		[ ] 73	[ ] 66	[ ] 59	[ ] 52	[ ] 45	POINTS	
4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt		[ ]	[ ]	[ ]	[ ]	[ ]		0/3
<b>LANGUAGE</b>		Repeat: She heard his lawyer was the one to sue after the accident. [ ]		The little girls who were given too much candy got stomach aches. [ ]		POINTS		
[ ]		[ ]		[ ]			1/2	
Fluency / Name maximum number of words in one minute that begin with the letter B		[ ] 1 (N ≥ 11 words)		[ ]		POINTS		
[ ]		[ ]		[ ]			1	
<b>ABSTRACTION</b>		Similarity between e.g. banana - orange = fruit [ ] eye - ear [ ] trumpet - piano		[ ]		POINTS		
[ ]		[ ]		[ ]			2/2	
<b>DELAYED RECALL</b>		Has to recall words WITH NO CUE	TRAIN	EGG	HAT	CHAIR	BLUE	POINTS
Category cue		[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	
Multiple choice cue		[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	0/5
<b>ORIENTATION</b>		[ ] Date	[ ] Month	[ ] Year	[ ] Day	[ ] Place	[ ] City	POINTS
[ ]		[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	
Adapted by: Z. Nasreddine MD, N. Phillips PhD, H. Chertkow MD		© Z. Nasreddine MD		www.mocatest.org		Normal ≥ 26 / 30		TOTAL
Administered by		[ ]		[ ]		[ ]		

Clinical Point

Mr. A showed elements of mania, psychosis, and delirium; we therefore considered a wide differential diagnosis

What should be the next step in managing Mr. A?

- a) obtain records from other facilities and collateral history
- b) start an antipsychotic
- c) order a brain MRI
- d) start an alcohol withdrawal protocol

The authors' observations

Mr. A showed elements of mania, psychosis, and delirium. We considered a broad differential diagnosis (Table, page 58). Mr. A initially could not provide reliable or accurate information. The least invasive next step was to obtain additional history



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### Clinical Point

Mr. A has a history of similar episodes; 3 years ago he was diagnosed with bipolar disorder, manic phase, and delirium of an unclear cause

#### Table

### Differential diagnosis of delirious mania

Dementia
Head trauma
Hypoglycemia
Hypoxemia
Infection (HIV, Lyme disease, tuberculosis, syphilis, bacterial illness)
Metabolic disturbances and endocrinopathies
Neoplasms
Poisons that impact central nervous system functioning
Psychiatric illness (including bipolar disorder, schizophrenia)
Seizures
Wernicke-Korsakoff syndrome and substance-related cognitive impairment or withdrawal syndrome

from his wife and other medical records to refine the differential diagnosis.

### HISTORY Bizarre behavior

Mr. A allows staff to speak with his wife and obtain records from a psychiatric hospitalization 3 years earlier. Mrs. A reports significant and rapid changes in her husband's behavior and personality over 3 months, but does not describe a recent alcohol relapse. Mr. A sleeps very little, remaining awake and active throughout the night. He frequently rearranges the furniture in their home for no clear reason. Once, he knocked on the door of a young female neighbor asking if she found him attractive.

Mr. A has a significant criminal history. Approximately 30 years ago, he was charged with attempted murder of his ex-wife and he had faced charges of attempted kidnapping and assaulting a police officer. However, he has no recent legal issues.

Mr. A has a history of episodes that are similar to this presentation. Seven years ago, he impulsively purchased a \$650,000 house after

his fourth wife died. He then had a \$90,000 heart-shaped pool installed. He also drove a tractor through his stepdaughter's car for no apparent reason. Also, 3 years ago, he displayed symptoms similar to his current presentation, including insomnia, irritability, and grandiosity. He engaged in strange behaviors, such as dressing up and imitating homeless people at his church.

During the hospitalization 3 years ago, clinicians gave Mr. A a diagnosis of bipolar disorder, current episode manic, and delirium of an unclear cause. A medical workup, including brain MRI, did not uncover a basis for his delirium. Antipsychotics (risperidone and perphenazine) and mood stabilizers (lithium and valproic acid), stabilized his condition; after 7 weeks, Mr. A was discharged, but he did not pursue outpatient psychiatric care.

### What is the most likely DSM-5 diagnosis?

- major neurocognitive disorder (dementia)
- alcohol use disorder (eg, Wernicke-Korsakoff syndrome)
- delirium secondary to mania
- psychotic disorder

### The authors' observations

DSM-5<sup>1</sup> suggests a stepwise approach to diagnosis, with consideration of:

- signs and symptoms
- substance use
- general medical condition
- developmental conflict or stage
- whether a mental disorder is present.

Mr. A's age and severe cognitive impairment raise the possibility of dementia. Rapid onset, history of similar episodes, and apparent inter-episode recovery make dementia unlikely. The history of alcohol abuse and mildly elevated hepatic function tests suggest a substance use disorder such as Wernicke-Korsakoff syndrome or a withdrawal syndrome. However, there is no evidence of excessive alcohol use over the past several months, toxicology studies

were negative, and vital signs were stable. General medical causes for Mr. A's presentation, such as hypoglycemia, head trauma, intracranial infection, and metabolic disturbance were considered, but physical examination and laboratory studies did not suggest any condition that would explain his condition.

Mr. A's previous psychiatric hospitalization is critical in clarifying the more likely diagnosis. A similar presentation yielded the diagnosis of bipolar disorder, manic phase. Our working diagnosis, therefore, was bipolar disorder with features of delirious mania.

### Delirious mania

Delirious mania was first described by Luther Bell in 1849 and is characterized by an acute and simultaneous onset of mania—

severe insomnia, poor judgment, grandiosity, excitement, emotional lability, bizarre hallucinations, and delusions—and delirium—altered consciousness, disorientation, and confusion.<sup>2,3</sup> Although there are no diagnostic criteria, some authors suggest that delirious mania is characterized by inappropriate toileting, denudation, profound lack of sleep, and episodic memory impairment that can last hours or days.<sup>4</sup> Catatonia frequently is seen with delirious mania.<sup>5</sup> Initial case descriptions described a high mortality rate, approaching 75% of patients.<sup>6</sup> There is little published literature and no classification of delirious mania in DSM-5.<sup>1</sup> Estimates are that delirium is concomitant in 20% to 33% of patients with mania.<sup>7,8</sup>

Several theories try to clarify the underlying etiology of delirious mania. Jacobowski et al<sup>9</sup> summarized the etiology and proposed that it is:

### Clinical Point

The rapid onset of Mr. A's symptoms, history of similar episodes, and apparent inter-episode recovery make dementia unlikely

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Figure 2

Mr. A's post-treatment Montreal Cognitive Assessment

Clinical Point

Delirious mania is characterized by inappropriate toileting, denudation, profound lack of sleep, and episodic memory impairment

MONTREAL COGNITIVE ASSESSMENT (MOCA)  
Version 7.3 Alternative Version

<b>VISUOSPATIAL / EXECUTIVE</b> 		Copy cylinder 	Draw CLOCK (Ten past nine) (3 points) 	POINTS [✓] Contour [✓] Numbers [✓] Hands 5/5 4/5				
<b>NAMING</b> 					3/3			
<b>MEMORY</b> Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.		TRAIN 1st trial [✓] 2nd trial [✓]	EGG 1st trial [✓] 2nd trial [✓]	HAT 1st trial [✓] 2nd trial [✓]	CHAIR 1st trial [✓] 2nd trial [✓]	BLUE 1st trial [✓] 2nd trial [✓]	No points	
<b>ATTENTION</b> Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order. Subject has to repeat them in the backward order.		[✓] 5 4 1 8 7 [✓] 1 7 4			2/2	CAT BLUE BROWN BROWN BROWN BROWN BROWN		
Read list of letters. The subject must tap with his hand at each letter/A. No points if ≥ 2 errors.		[✓] FBACMNAAJKLBFAFAKDEAAAJAMOF AAB			1/1	BROWN BROWN BROWN BROWN BROWN		
Serial 7 subtraction starting at 80		[✓] 73	[✓] 66	[✓] 59	[✓] 52	[✓] 45	3/3	
<b>LANGUAGE</b> Repeat: She heard his lawyer was the one to sue after the accident. The little girls who were given too much candy got stomach aches.		[✓] eye - ear [✓] trumpet - piano			2/2	BROWN BROWN BROWN BROWN BROWN		
Fluency / Name maximum number of words in one minute that begin with the letter B		[✓] _____ (N ≥ 11 words)			1/1	BROWN BROWN BROWN BROWN BROWN		
<b>ABSTRACTION</b> Similarity between e.g. banana - orange = fruit		[✓] eye - ear [✓] trumpet - piano			2/2	BROWN BROWN BROWN BROWN BROWN		
<b>DELAYED RECALL</b> Has to recall words WITH NO CUE		TRAIN [✓]	EGG [✓]	HAT [ ]	CHAIR [ ]	BLUE [✓]	4/5	
Category cue		[✓]			Points for UNCUED recall only	BROWN BROWN BROWN BROWN BROWN		
Multiple choice cue		[✓]			Add 1 point if ≤ 12 yr edu	BROWN BROWN BROWN BROWN BROWN		
<b>ORIENTATION</b>		[✓] Date	[✓] Month	[✓] Year	[✓] Day	[✓] Place	[✓] City	6/6
Adapted by: Z. Nasreddine MD, N. Phillips PhD, H. Chertkow MD © Z. Nasreddine MD www.mocatest.org		Normal ≥ 26 / 30			TOTAL	24/30	Add 1 point if ≤ 12 yr edu	

- 1 of 3 types of mania, including: acute and delusional manias, as initially proposed by Kraepelin
- a severe form of catatonia
- a condition akin to, but distinct from, delirium with similar underlying medical causes

• a primary psychiatric disorder underlying the cause of delirium.

EVALUATION Brain changes

For several days, Mr. A continues to engage in strange behavior. He tries to take patients'

belongings, is denudative, crawls on floors, licks walls, is unable to feed himself, and exhibits odd motor movements with purposeless motor activity.

We consult our internal medicine team to identify treatable, medical causes. Results of serum B<sub>12</sub>, thyroid-stimulating hormone, and rapid plasma reagin studies are within normal limits. Urinalysis is negative. A brain MRI reveals numerous white-matter T<sub>2</sub>-weighted and FLAIR hyperintensities, indicating small-vessel ischemic changes that are consistent with the findings of an MRI 3 years ago. A sleep-deprived EEG with temporal leads obtained on Day 4 of hospitalization demonstrates a diffusely slow and marginally to poorly organized background, believed to indicate global cerebral dysfunction that is most consistent with nonfocal global encephalopathy. There is no seizure activity. We do not perform a lumbar puncture because of Mr. A's absence of focal neurologic deficits, lack of fever, and normal white blood cell count.

#### What is the most appropriate treatment?

- electroconvulsive therapy (ECT)
- high-dose benzodiazepine
- mood stabilizer
- antipsychotic

#### The authors' observations

We strongly suspect that Mr. A has delirious mania. Symptoms and signs of mania include labile mood, excessive spending, grandiosity, insomnia, and psychosis together with delirium (marked disorientation, confusion). We ascribed Mr. A's odd motor behaviors to catatonia, a hallmark of delirious mania. The literature has little description of EEG findings in suspected cases of delirious mania; however, abnormal EEG tracings have been reported.<sup>10</sup> We also speculated that Mr. A's EEG reflected effects produced by his prescribed antipsychotic regimen.

#### Treatment

There is no clear consensus on treating delirious mania. Because catatonia is a key feature

of delirious mania—whether etiologically or as a prominent sign of the condition—ECT and benzodiazepines are proposed as primary treatments. In a study of 16 patients with delirious mania, Karmacharya et al<sup>4</sup> found ECT to be effective, with patients showing improvement after 1 to 4 treatments. Lee et al<sup>10</sup> reported similar findings. Although a high-dose benzodiazepine is not as effective as ECT, a 1-time oral dose of 3 to 4 mg of lorazepam has been used to treat delirious mania.

The efficacy of antipsychotic and mood-stabilizing pharmacotherapy is not clear. Bond<sup>3</sup> described 3 cases in which patients were treated effectively with a typical antipsychotic (haloperidol or chlorpromazine) and lithium. Jung and Lee<sup>11</sup> demonstrated the efficacy of atypical antipsychotics, with a marked improvement in symptoms within 1 week. However, other studies do not support these findings. Karmacharya et al<sup>4</sup> found that typical antipsychotics 1) make the clinical picture worse by increasing extrapyramidal symptoms and 2) produce inconsistent effects. Mood stabilizers sometimes proved beneficial.

Karmacharya et al<sup>4</sup> further argued that the delay in improvement seen with any antipsychotics and mood stabilizers suggest they should not be considered a first-line treatment. These discordant findings are the result of a small number of studies and a lack of understanding of the exact nature of delirious mania.

#### TREATMENT Quick response

Mr. A's symptoms rapidly resolve with a combination of quetiapine, 800 mg/d, haloperidol, 10 mg/d, and lithium, 1,200 mg/d. His mood returns to euthymia and his psychotic symptoms abate. He is able to attend to all activities of daily living. Mental status clears and he is fully oriented and able to hold a logical conversation. He scores 28 out of 30 on a subsequent Montreal Cognitive Assessment, administered 11 days after the initial assessment (*Figure 2*), indicating normal

#### Clinical Point

**Because catatonia is a key feature of delirious mania, ECT and benzodiazepines are proposed as primary treatments**

## Clinical Point

We chose an antipsychotic and a mood stabilizer because hospital records indicated they effectively treated a similar episode

## Related Resources

- Nunes AL, Cheniaux E. Delirium and mania with catatonic features in a Brazilian patient: response to ECT. *J Neuropsychiatry Clin Neurosci*. 2014;26(1):E1-E3.
- Danivas V, Behere RV, Varambally S, et al. Electroconvulsive therapy in the treatment of delirious mania: a report of 2 patients. *J ECT*. 2010;26(4):278-279.

### Drug Brand Names

Chlorpromazine • Thorazine	Perphenazine • Trilafon
Haloperidol • Haldol	Quetiapine • Seroquel
Lithium • Eskalith	Risperidone • Risperdal
Lorazepam • Ativan	Valproic acid • Depakene

neurocognitive function. He returns to his baseline level of functioning and is discharged in psychiatrically stable condition. Mr. A has no recollection of the bizarre behaviors he displayed earlier in his hospitalization.

### The authors' observations

We started Mr. A on antipsychotics because of his initial level of agitation. In reviewing pharmacotherapy options for Mr. A's mania and delirium, we contemplated several options. Quetiapine and lithium were chosen after a review of outside hospital records demonstrated a combination of a mood stabilizer and an antipsychotic was effective in treating a previous similar episode, which led to remission of Mr. A's symptoms. We chose quetiapine because of its highly sedating properties, suspecting that it would help treat his insomnia. We thought that the risk that lithium would make delirium worse was mitigated by Mr. A's previous therapeutic

response to it. Haloperidol was added for treating delirium, given its more potent D2 antagonism. Mr. A responded quickly to these interventions.

We did not consider ECT at the beginning of Mr. A's admission, and we avoided sedative-hypnotic agents because we were concerned that a benzodiazepine might make his delirium worse. In light of available data suggesting that ECT and benzodiazepines are preferred treatments for delirious mania, it is noteworthy that Mr. A responded so robustly and rapidly to an antipsychotic and a mood stabilizer.

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10. Lee BS, Huang SS, Hsu WY, et al. Clinical features of delirious mania: a series of five cases and a brief literature review. *BMC Psychiatry*. 2012;12:65.
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## Bottom Line

Consider delirious mania in any patient who has a history of bipolar disorder presenting with co-occurring symptoms of mania and delirium. Collateral information is vital to establishing a diagnosis. With suspected delirium, rule out concomitant reversible medical problems. Electroconvulsive therapy, high-dose benzodiazepines, antipsychotics, and mood stabilizers have shown efficacy.