

CASES THAT TEST YOUR SKILLS

Mr. P suffers anxiety spells and feels faint, breathless, and near collapse. Numerous doctors could not find the cause. Are these episodes panic attacks, or something more serious?

Getting to the heart of panic disorder

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HISTORY LIFE AT HOME

For nearly 10 years Mr. P, age 50, has had episodes of shortness of breath, increasing perspiration, and faintness that occur 2 to 3 times a month, usually when he's out of the house. Fearing his legs will give out in public, he never goes out except to shop with his wife.

Once a welder for an aircraft company, he has been unable to work for 6 years. He worries incessantly about his medical expenses, and smokes 1 pack of cigarettes per day to help control the anxiety.

Baseline laboratory tests reveal a low-density lipoprotein cholesterol level of 199 mg/dL, exceeding the optimal range by 100 mg/dL. Total cholesterol is 288 mg/dL and triglycerides are 244 mg/dL. Thyroid stimulating hormone, liver function, renal function, serum electrolytes, and serum glucose are normal. Mr. P meets DSM-IV-TR criteria for panic disorder with agoraphobia and is started on citalopram, 20 mg/d.

At follow-up 2 weeks later, Mr. P complains that the citalopram is causing "aches and pains" in his back and legs, so we switch to controlled-release paroxetine, 12.5 mg/d, which we found in clinical practice to be more tolerable than immediate-release paroxetine. After 2 weeks, he says he cannot tolerate the paroxetine because of "body aches."

At Mr. P's insistence, we switch to alprazolam, 0.5 mg tid, although his desire to start taking alprazolam makes us suspect that he might be trying to obtain this benzodiazepine for illicit use.

Neuropsychological tests—including a diagnostic interview, Minnesota Multiphasic Personality Inventory, and Millon Clinical Multiaxial Inventory—are ordered after Mr. P's third visit. He seems guarded when answering questions about himself during these interviews. He acknowledges having severe physical symptoms but appears unwilling to accept a psychiatric diagnosis for them.

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Mr. P's clinical course suggests:

- panic disorder
- somatoform disorder
- prescription drug abuse



The authors' observations

Panic disorder is usually chronic and can cause considerable morbidity. DSM-IV-TR criteria for panic disorder include recurrent or unexpected panic attacks and persistent fear of additional attacks and their implications and consequences.¹ Panic disorder can also lead to social problems including unemployment, financial dependence, and substance abuse or dependence.²

Mr. P's anxiety, shortness of breath, faintness, and profuse sweating during episodes match DSM-IV-TR criteria for panic attacks (*Table 1*). His ruminative and obsessive attitude toward his physical problems does not suggest somatoform disorder because he also thinks obsessively about other issues, such as his medical expenses.

We will watch for signs of prescription drug abuse, including premature requests for refills, use of multiple pharmacies, or complaints of lost prescription or medication.³

FURTHER HISTORY FAINT MEMORY

Mr. P first sought medical help in 1996 after fainting at home while standing up. A few weeks later he experienced sudden dizziness, faintness, and perspiration while shopping with his wife. During that episode, he said, he barely made it out of the store before passing out in his truck. His wife described him as "pale and gray" and rushed him to the emergency room. The ER physician suspected that Mr. P suffered a "convulsive episode" and ordered testing. Results of awake and sleep EEG and head MRI were

Table 1

DSM-IV-TR criteria for panic attack

A discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:

- palpitations
- sweating
- trembling or shaking
- shortness of breath or smothering
- feeling of choking
- chest pain or discomfort
- nausea or abdominal distress
- feeling dizzy, unsteady, lightheaded, or faint
- derealization or depersonalization
- fear of losing control or going crazy
- fear of dying
- paresthesias
- chills or hot flashes

Source: Adapted and reprinted with permission from the *Diagnostic and Statistical Manual of Mental Disorders (4th ed, text revision)*. Copyright 2000. American Psychiatric Association.

normal. Laboratory work revealed a positive antinuclear antibody (ANA) and rheumatoid factor (RF), suggesting pulmonary vasculitis.

Mr. P, who was still working at the aircraft company, continued to seek medical opinions. He was diagnosed alternately as having chronic fatigue syndrome, fibromyalgia, and sleep apnea. He said a pulmonologist told him he had lung fibrosis but that the disorder would resolve without treatment. At one point, he was prescribed a continuous positive airway pressure device (CPAP) to manage what was thought to be sleep apnea.

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Two years and 17 doctors later, Mr. P's physical symptoms persisted. He stopped working and began collecting disability insurance benefits. Frustrated over the lack of a definitive diagnosis, he then went 6 years without seeing a doctor.

Based on findings to this point, Mr. P has:

- **pulmonary dysfunction**
- **panic disorder**
- **a heart condition**
- **somatoform disorder**



TREATMENT INTENSE 'PANIC'

Mr. P has been coming to our clinic for 8 months. He takes 0.5 mg of alprazolam twice daily—less frequently than prescribed—and has never prematurely requested a refill, so prescription abuse is ruled out. He joins a fibromyalgia support group but laments that his symptoms differ from those of other group members. During follow-up visits, he continues to focus on his somatic symptoms.

During a routine visit, Mr. P tells us that he recently suffered an intense “panic” episode—consisting of shortness of breath, dizziness, diaphoresis, chest pain, palpitations, and near syncope—less than 15 minutes after he started clearing brush in his backyard. We notice marked clubbing on Mr. P's fingers, a physical sign seen in congenital heart disease, infective endocarditis, pulmonary fibrosis, and numerous other diseases.⁴

The clubbing prompts us to ask about his occupational history in detail, as work-related exposure to chemicals or fumes may result in pulmonary fibrosis. We then learn that for approximately 20 years before joining the aircraft company, Mr. P welded without wearing protective equipment—all that time inhaling noxious fumes while working.

How would you have handled this case?

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We refer Mr. P to an internist, who finds clubbing of the fingers, decreased breath sounds, and increased pulmonic second heart sound (P2) on auscultation. The internist then orders:

- ECG, which reveals right axis deviation, incomplete right bundle branch block, and right ventricular hypertrophy (RVH)
- Pulmonary function tests, which show decreased diffusing capacity. Subsequent heart catheterization reveals RVH and concentric left ventricular hypertrophy.

Mr. P is told to quit smoking and to use his CPAP nightly to minimize progression of his right ventricular dysfunction. He had been using his CPAP sporadically because he found it uncomfortable.

How can the psychiatrist distinguish cardiopulmonary from panic symptoms?

- **Use one of several available screening tools**
- **Thoroughly review the patient's history**
- **Have the patient describe his/her symptoms**



The authors' observations

Panic attacks often mimic symptoms of cardiac or pulmonary disease. By the same token, symptoms of an underlying cardiac or pulmonary disease can be mistaken for panic disorder, particularly in patients whose past episodes appear to meet DSM-IV-TR panic attack criteria (*Table 2*).⁵

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Table 2

Panic attack symptoms that may suggest a cardiopulmonary disease

Panic attack symptom	Possible cardiopulmonary disorder
Palpitations, chest discomfort, feeling faint	Cardiac arrhythmia
Breathlessness, fatigue, weakness	Heart failure
Weakness, nausea, diaphoresis, feelings of hot/cold associated with diaphoresis, paresthesias, lightheadedness, fear of dying	Cardiac or neurologic syncope
Intense, escalating chest pain/discomfort; may be accompanied by nausea, diaphoresis, dizziness, feelings of hot/cold associated with diaphoresis	Acute myocardial infarction
Shortness of breath, fatigue, weakness, feeling of choking	Pulmonary congestion*

* Because the lung parenchyma and visceral pleura lack pain fibers, pulmonary abnormalities related to these structures can be advanced before symptoms are noticed.

Source: reference 5

Patients with panic disorder seek medical help more frequently than do patients with other anxiety disorders.⁶ About one-third of patients with panic disorder seek psychiatric treatment, and almost as many seek medical help,⁶ possibly because of the complicated array of symptoms simultaneously involving cardiac and pulmonary systems.

To avoid unnecessary referrals, psychiatrists need to quickly and accurately discern:

- when a medical problem is causing the patient’s symptoms
- how far to carry the medical evaluation, particularly for patients with palpitations, chest pain, or shortness of breath.

No reliable screening tool exists for differentiating panic from cardiopulmonary symptoms. A screening inventory developed by Barsky et al⁷ for patients complaining of palpitations focuses on somatization and hypochondriacal attitudes, which are common among psychiatric patients. This tool, however, does not take into account presence of cardiac risk factors.

Also, a psychiatric patient whose mental disorder or comorbid axis II pathology compromises

speech or cognitive function may have trouble communicating potentially serious medical problems to other clinicians. Mr. P’s guarded demeanor and obsession toward his physical problems may have kept him from accurately describing his symptoms in a clinical setting. Alternately, he might have misinterpreted his pulmonologist’s explanation of pulmonary fibrosis, thus believing the disorder was not serious.

Finally, patients with panic disorder are more aware of their heartbeats and physiologic responses than are persons without panic disorder,⁸ thus further complicating diagnosis.

UNCOVERING A MEDICAL CAUSE

Suspect an underlying heart or lung problem when panic symptoms affect breathing or resemble a heart attack.

Check for predisposing risk factors for cardiac disease. Ask the patient detailed questions about past and current medical problems, including:

- smoking
- hyperlipidemia
- diabetes

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- heart problems
- pulmonary disease
- family history of any medical problems
- work-related exposure to any metal that may increase risk of cardiopulmonary disease.

Refer the patient for medical evaluation if any of the above risk factors are discovered.

Review medical treatment history. Mentally ill persons are more likely than those without a mental illness to receive inadequate general medical and preventative care.⁹ Patient, provider, and health care system issues—such as lack of insurance or the patient’s inability to recognize or describe symptoms—may impede medical care delivery to the mentally ill.⁹

Review overall history. A deeper look into Mr. P’s work and diagnostic history uncovered numerous possible causes of right heart failure, including:

- pulmonary fibrosis secondary to inhalational injury
- possible pulmonary vasculitis as indicated by his positive ANA and RF.

As time progressed, either of these underlying lung pathologies amid sleep apnea and smoking could have increased Mr. P’s cardiopulmonary risk.

FOLLOW-UP A PANIC-FREE FUTURE

Over the next 4 weeks, Mr. P has stopped taking alprazolam and begins to understand that his episodes were secondary to cardiopulmonary dysfunction. No longer afraid of developing a panic attack, he is going out more often.

Mr. P recently told us that he started a part-time job, decreased his smoking to a half pack/day, and has a plan to quit smoking completely. He adds that he is using his CPAP machine regularly and has remained free of panic-like episodes. He limits physical exertion to avoid cardiopulmonary symptoms.

References

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Related resources

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DRUG BRAND NAMES

Alprazolam • Xanax
Citalopram • Celexa
Paroxetine • Paxil

DISCLOSURE

Dr. Khan is a speaker for Wyeth Pharmaceuticals.

Dr. Grimsley reports no financial relationship with any company whose products are mentioned in this article or with manufacturers of competing products.

2. Leon AC, Portera L, Weissman MM, et al. The social costs of anxiety disorders. *Br J Psychiatry* 1995;166(suppl 27):19-22.
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A serious underlying heart or respiratory disease can go unnoticed in a patient with a history of recurrent panic attacks. Watch for risk factors that could predispose a patient to a cardiopulmonary problem. Review the history to uncover risk factors and ensure that the patient is receiving regular medical treatment.

BottomLine