

# A Shot in the Dark: Failing to Recognize the Link Between Physical and Mental Illness

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A 74-year-old widowed white man with chronic rheumatoid arthritis presented with nausea and weight loss. He was diagnosed with failure to thrive and admitted for hydration. Misoprostol was determined to be the etiology of his symptoms and he was discharged home. Three days later, he killed himself with a gunshot to the head. Clinicians often fail to recognize those at high risk for suicide. Suicidal risk is increased in both psychiatric and physical illness, and particularly when both are present. Psychiatric illness, particularly depression, often underlies chronic medical illness. The purpose of this case report is to remind health care providers of the strong association between depression and chronic medical illness, and to consider this in all patients, including those who present solely with physical symptoms. Recognizing this association and screening for it, as recommended by the U.S. Preventive Services Task Force, may prevent the unnecessary tragedy of suicide.

**KEY WORDS:** depression; chronic disease; risk assessment; screening.  
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## INTRODUCTION

Psychiatric and physical illnesses frequently coexist. This association is to be expected both by coincidence and because there is an increased risk of depressive disorders in most chronic medical conditions. Despite its prevalence and the availability of effective treatment options, as well as its adverse impact on morbidity and mortality, depression remains underdiagnosed and under-treated.<sup>1</sup> This may occur for a number of reasons. First, symptoms of depression may be similar to those of an underlying medical illness. Second, in the context of a serious medical illness, it can be difficult to differentiate normal psychological reactions from clinical depression. The following case report serves as an important lesson for all providers regarding depression in chronic medical illness and the potential dire consequences of failing to recognize it.

## CASE REPORT

A 74-year-old man with a history of chronic deforming rheumatoid arthritis (RA) was admitted after a 1-month history of nausea, emesis, and a 13-lb weight loss. The resulting weakness was so debilitating that he was no longer independent in activities of daily living. He denied signs or symptoms of gastrointestinal bleeding, myocardial ischemia, or a cerebrovascular event. Six weeks prior to admission, he was started on sulfasalazine for presumed active RA and misoprostol for gastrointestinal protection. Three weeks prior to admission, the sulfasalazine was changed to hydroxychloroquine because of nausea.

His medical history also included coronary artery disease with a myocardial infarction, peptic ulcer disease, and diverticulitis status post two partial colectomies. Medications included aspirin, atenolol, celecoxib, hydroxychloroquine, lansoprazole, and misoprostol. He denied tobacco, alcohol, or illicit drug use. Although widowed and living alone, he reported having a girlfriend and adult children in the area.

Physical exam revealed a kyphotic, elderly white male in no acute distress. He was afebrile with a respiratory rate of 18/minute and a room air resting oxygen saturation of 98%. Blood pressure was 132/90 mm Hg with a heart rate of 93/minute. His BMI was 19. Mucous membranes were dry and skin was thin with multiple ecchymoses. Cardiac rhythm was regular with a soft S1 and a longstanding 3/6 holosystolic murmur at the apex. Bibasilar fine crackles were auscultated at the lung bases. Abdominal exam was significant for mild tenderness to deep palpation in the right upper quadrant. He had synovitis of the metacarpalphalangeal joints and bilateral ulnar deviation. Although he was weak, his strength testing was symmetric in all extremities.

Initial laboratory studies included electrolytes, blood urea nitrogen, creatinine, liver tests, lipase, amylase, and thyroid-stimulating hormone, all of which were within normal limits. His hemoglobin had decreased from a value of 14.2 g/dL 8 months previously to a value of 11.4 g/dL on admission. Stool was negative for occult blood and an anemia work-up was consistent with anemia of chronic disease. An erythrocyte sedimentation rate and albumin obtained 1 month prior to admission were 122 mm in 1 h and 3.5 g/dL, respectively. An electrocardiogram and radiographs of the chest and abdomen did not reveal an acute process.

The patient was admitted without a specific diagnosis, although he was noted to meet criteria for “failure to thrive”.<sup>2</sup> He was hydrated with IV fluids and his diet was supplemented with high-calorie shakes between meals. His physicians con-

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**Table 1. Sensitivity and Specificity of Two Depression Screening Questions<sup>17,24</sup>**

Questions	Sensitivity (%)	Specificity (%)
Over the past 2 weeks, have you felt down, depressed or helpless?	96 (90–99)	57 (53–62)
Over the past 2 weeks, have you felt little interest or pleasure in doing things?	72.6	87.4

sidered, but ruled out, the possibility of Addison's disease, thyroid disorders, renal failure, and hepatitis. Because of gastrointestinal upset, misoprostol was discontinued, as nausea and emesis are known side effects of this medication. The patient had an almost immediate improvement in his appetite. Rheumatology made no changes in his treatment for advanced active RA and arranged to see him as an outpatient. He was evaluated by physical and occupational therapists, who documented adequate performance of activities of daily living. After 48 h, he was discharged to his home on his previous medications with the exception of misoprostol. Three days after discharge, a family member contacted the attending physician. The patient had killed himself with a gunshot to the head.

## DISCUSSION

As illustrated in this dramatic case, clinicians often fail to identify patients at high risk for suicide. To improve recognition and prevention, many studies have aimed to identify risk factors for completed suicide. Recognized risk factors for suicide include physical illness and poor functional capacity, psychiatric illness, sociodemographics, and family history of suicide.<sup>3,4</sup>

Physical illness is a profound risk factor, contributing to over 70% of suicides in those over the age of 60.<sup>3</sup> Chronic medical illness is strongly associated with depression and substance abuse; however, even when the latter risk factors are accounted for, medical illness is still associated with increased suicidal risk.<sup>3,5,6</sup> Higher rates of suicide have been reported in cancer, AIDS, end-stage renal disease, neurological disorders such as multiple sclerosis, asthma, and a number of other medical conditions.<sup>5,7</sup> Data from the U.S. National Comorbidity Survey identified a dozen general medical diagnostic categories with statistically significantly elevated odds ratios for suicide attempts, most ranging from 1.1 to 3.4, but with a much higher ratio in AIDS (44.1).<sup>8</sup> Cancer and asthma patients each have a fourfold risk of attempting suicide compared to the general population, even after adjusting for demographic and psychiatric variables.<sup>5,6</sup> Loss of or poor functional capacity and associated chronic pain may be a common thread among these medical conditions that links them with suicidal risk.<sup>9,10</sup>

Clinically, however, the use of a medical diagnosis alone in estimating suicidal risk is unhelpful. What does appear useful is that suicides in the medically ill, as in the general population, appear to be related to unrecognized comorbid psychiatric illness, most often depression.<sup>6,11</sup> Rather than focus on particular medical diagnoses, it is more appropriate to determine whether a suicide-prone psychiatric condition is present in a medically ill patient; whether the patient is at a

particularly emotionally difficult time in the illness course; and whether there are secondary effects of the medical illness such as pain, physical disfigurement, disability, cognitive dysfunction, and disinhibition, which add to the risk. Specific suicide-prone psychiatric conditions of which the clinician must be aware include major depression and other affective disorders, anxiety disorders, and substance abuse (most often alcohol).<sup>3,4,6,10,12,13</sup>

In the United States, sociodemographic characteristics associated with suicide include social isolation, age over 60, male gender, and Caucasian or Native American ethnicity.<sup>3,4,13</sup> Seventy-three percent of all completed suicides in the United States are committed by white men over the age of 60.<sup>4</sup> Life stressors also play an important role. These stressors often include financial, personal, or legal difficulties in the young and physical illness or personal losses in the elderly.<sup>3,13</sup>

Primary care physicians now diagnose and treat more patients with depression and anxiety than mental health professionals.<sup>14,15</sup> Some studies have demonstrated that improved education of physicians regarding depression and suicide has led to decreased rates of both.<sup>3,12,16</sup> However, such benefits may be short-lived, as was demonstrated in Sweden when all measures of depression and suicide returned to baseline 3 years after the study ended.<sup>3</sup> The U.S. Preventive Services Task Force now recommends screening all adults for depression; however, the appropriate frequency of screening has not yet been established. Asking two questions—"Over the past 2 weeks, have you felt down, depressed, or helpless?" and "Over the past 2 weeks, have you felt little interest or pleasure in doing things?"—has been shown to detect depression as accurately as longer screening formats with varying levels of specificity and sensitivity reported in the literature<sup>17</sup> (see Table 1).

This case was initially discussed at a resident morning report in 2000. After the description of the patient's initial presentation (without the laboratory results or outcome), the residents developed a detailed differential diagnosis, including an adverse drug reaction (most likely to hydroxychloroquine), gastrointestinal bleeding, malignancy, polymyositis, RA complications, vasculitis, polymyalgia rheumatica, giant cell arteritis, anemia, thyroid disorders, nutritional deficiencies, and failure to thrive. A variety of additional diagnoses were also considered; however, depression was not among them. While it is possible that the patient did have an unrecognized medical condition, depression was such an overarching issue that only its recognition and consideration of suicide risk could have changed the outcome.

The case was presented a second time at a small resident's conference in 2006. The residents were again asked to form a differential diagnosis. *Fifteen minutes prior* to the presentation, the same residents coincidentally attended a lecture on depression and suicide, *yet they still did not think to ask about either* in this case. It is not clear whether the residents' failure to recognize depression shortly after the lecture represents a deeper bias toward medical explanations and away from psychological ones or limited effectiveness of lectures. Some lessons also seem to be best learned through mistakes and tragic experiences, such as this one.

This patient was the prototypical suicidal patient: an isolated elderly white male with a debilitating, chronic medical illness. So how then did this patient make it through an entire hospital stay, from emergency department to discharge, without a single

question asked of him regarding feelings of depression and/or suicidal ideation by the physicians who saw him? Additionally, how did residents fail to consider depression in this patient when presented at a case conference, coincidentally following a lecture on depression and suicidal risk?

One answer is a failure of pattern recognition. Pattern recognition is an important skill that separates expert clinicians from early clinical learners.<sup>18</sup> Pattern recognition has been described as “problem resolution by recognition of new problems as ones that are similar or identical to old ones already solved, and the solutions are recalled”.<sup>19</sup> It requires significant expertise and thus is not often utilized by novice learners despite its proven likelihood of diagnostic success. This lends itself to the explanation that, while most physicians have learned about suicidal risk factors, if they themselves have not previously had similar case experiences, either through observation or direct care, they may still fail to recognize the prototypical suicidal patient. Unfortunately, this may have dire consequences. Such failure to “connect the dots” may also lie in the dichotomous way physicians think about physical and mental illnesses, tending only to consider a psychiatric diagnosis when diagnostic testing is unrevealing of a medical cause of symptoms. The Internists who saw this patient (or heard his case later) interpreted his failure to thrive through the prism of his past history, his medications, and the possibility of a new medical diagnosis. Without considering the possibility of depression, risk for suicide did not occur to them. Differential diagnoses often fail to combine the consideration of medical and psychiatric perspectives in any meaningful way, despite the extensive literature documenting how frequently medical and psychiatric illnesses occur together.

Another reason clinicians may not ask about suicide is discomfort with the subject and not knowing how to ask. The topic is an uncomfortable one, yet most patients experiencing suicidal thoughts are relieved to be able to discuss them with a concerned healthcare provider. One technique is asking “Have you ever felt so bad that life did not seem worth living?” followed by “Was it bad enough that you thought of ending your life?”<sup>20</sup> If the answers to these questions are affirmative, more specific questioning should be initiated, such as frequency of such thoughts, previous attempts, specific suicidal plan, and availability of firearms or other lethal methods. Fears of insulting the patient or increasing suicidal behavior by asking about it are unfounded and should not prevent a clinician from sensitively asking these questions.<sup>16</sup> More detailed information regarding the evaluation and management of suicidal patients can be found elsewhere.<sup>20</sup>

A brief note follows on the management of patients with depression and the potential of increased suicidal risk with antidepressant therapy. There has been recent controversy regarding the use of selective serotonin reuptake inhibitors and suicide, which has provoked much debate. The bottom line is that most studies have not found any increased risk for suicide associated with selective serotonin reuptake inhibitors use in adults.<sup>21–23</sup> Untreated depression, however, is clearly associated with an increased risk for suicide. Clinically, one may encounter an individual patient whose suicidal ideation does temporarily increase after the initiation of antidepressant therapy, which makes close follow-up necessary. However, the evidence does not support withholding treatment for patients with clinical depression based on the potential of increased suicidal risk.

In conclusion, this case report serves as a reminder to all health care providers of the strong association between depression and chronic medical illness. To reveal an underlying psychiatric illness, providers must consider the diagnosis of depression even in patients who present solely with physical symptoms. Using simple screening questions for depression can reveal a treatable illness and prevent an unnecessary tragedy.

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