Suicidal Behavior

Suicidal ideation is common, with a lifetime prevalence of about 10%; suicide attempts, however, are much less common, with a lifetime prevalence of only 0.3%, and completed suicide is rarer still, occurring in about 0.012%.

For the clinician, one of the most difficult tasks is gauging the risk of a suicide attempt or a completed suicide among those with suicidal ideation. Overreacting leads to too many hospitalizations, with all their disruptiveness; underreacting, however, may be a fatal error. Although certain risk factors for suicide attempts and completed suicide exist, as described below, it must be borne in mind that they provide only the roughest of guidelines.

RISK FACTORS

In gauging the risk of attempted or completed suicide among adults with suicidal ideation, factors to consider include age, race, religious affiliation, sex, the presence or absence of strong personal bonds, the presence or absence of recent significant losses, concurrent psychiatric or general medical illnesses, any history of prior attempts, the patient's current mental status and certain other aspects of the patient's recent behavior, and, finally, the intended means of suicide.

Younger patients, that is to say those under 45, are more likely to make an attempt than are older patients, especially those over 60, who are more likely to commit suicide.

Blacks, at least in the United States, are more likely to make attempts, in contrast to whites, who are more likely to succeed; American Indians, however, have an even higher rate.

Certain religious faiths, such as Roman Catholicism or Judaism, strongly prohibit suicide and make completed suicide unlikely; by contrast, most Protestant faiths, lacking such a strong prohibition, are less likely to constitute a restraining influence. The mitigating effect of Roman Catholicism and Judaism, of course, depends on the depth of the patient's belief: for those lacking a strong faith, simple membership in the denomination has no influence on the risk of completed suicide.

Females are more likely to attempt suicide, and males to complete it, and this is true for all ages.

The presence of strong personal bonds of friendship or affection argue for an attempt; by contrast, those who live in isolation or are estranged from those they were once close to are at higher risk for completed suicide.

Recent losses, such as divorce, relocation and leaving behind all that was familiar and dear, or the death of a loved one, all increase the risk of completed suicide.

Certain psychiatric or general medical illnesses also increase the risk of completed suicide. Important among the psychiatric illnesses are depression (either of major depression or bipolar disorder), a mixed-manic episode, alcoholism, schizophrenia and borderline personality disorder.

The suffering of depression, when coupled with its attendant pessimism and hopelessness, often reduces the patient to a position where suicide seems not only desirable but also often logical. Agitation increases the risk, and the risk is further compounded when guilt demands the ultimate punishment, and even higher still when delusions of guilt occur. Paradoxically, the listlessness and anergia of severe depression may protect the patient: suicide simply requires too much energy. Consequently, the risk is greatest when the depressed patient is first beginning to improve and has regained some energy but not any hope or optimism.

Mixed manic episodes constitute a fertile ground for completed suicide, as they are characterized by intense dysphoria and despair combined with more than a sufficient amount of energy to act with violence on suicidal impulses.

Alcoholics who are actively drinking or who have just recently become sober constitute a group that accounts for many suicides, and this is especially the case when there is a concurrent depression. The despair, self-pity, and fierce resentment felt by most such drinkers is fertile ground for self-destruction.

Schizophrenia increases the risk, and, in contrast with most other illnesses, the risk is higher among the relatively young who are early on in the course of the illness than it is among those who are older and who have "burnt out." Good education and high ambition also increase the risk in schizophrenia; the absolute inability to live up to earlier goals creates a barren sense of hopelessness for the patient with schizophrenia. Auditory hallucinations that command patients to kill themselves may also play a role; however, they may not be as important as was once thought.

Although borderline personality disorder is notorious for suicidal behavior (with some patients' histories containing literally dozens of admissions for suicide attempts), a not insignificant minority, perhaps 5%, actually do die at their own hands.

In addition to these psychiatric illnesses, certain general medical illnesses, generally those associated with long-term suffering and an overall bleak prognosis, also increase the risk of completed suicide. Notable among these are cancer, chronic renal failure with hemodialysis, AIDS, multiple sclerosis and Huntington's disease. Furthermore, and for reasons yet obscure, epilepsy characterized by complex partial seizures also increases the risk of death by suicide.

A history of suicide attempts may also increase the risk of completed suicide; however, this holds true only if the prior attempt occurred within a specific period of time. Initially, in the period immediately following an attempt, the risk is generally low. Over the subsequent 1 or 2 years it remains

higher and then tends to drop down; patients whose prior attempts were 2 or more years in the past tend to be at not much greater risk than those who have never made an attempt.

The current mental status and certain other aspects of the patient's recent behavior may also help in gauging the risks. An intractable sense of hopelessness places the patient at a higher risk; conversely, a flicker of hope, no matter how dim, may allow the patient to endure current suffering. Those who give away their valuables, finalize their will, or make similar arrangements may be indicating that their mind is made up. Another indication that a depressed patient has settled on suicide as a way out is a sudden and unexpected brightening of mood. Some, having arrived at a decision that will finally provide relief, may almost seem cheerful as they prepare their death.

The intended means of suicide also affects the risk of completion. A patient who plans to use a highly lethal method in a situation that would make discovery and rescue most unlikely is at greater risk for death than the patient whose method is relatively innocuous and who plans the deed in circumstances that at times almost ensure discovery and rescue. For example, patients who plan to hang themselves in unfrequented woods are at greater risk than patients who contemplate an overdose of over-the-counter sleeping tablets while lying in bed with their bed-partner. One should, however, ask the patient what was expected from the method, for some may underestimate or overestimate lethality. For example, some may believe that fluoxetine is as lethal as a tricyclic antidepressant; conversely, others may be completely unaware of the high lethality of acetaminophen.

Using the foregoing risk factors to gauge the risk of attempted or completed suicide is not straightforward. Although reasonably certain judgments may be made in cases where patients fall at the "extremes" of risk, there is an enormous gray area, which, unfortunately, contains most patients with suicidal ideation. Lest one despair of making any estimate of risk, however, consider the following "extreme" examples. First, consider the case of a 68-year-old white protestant male who is referred by his internist after he told the internist that he was thinking of killing himself. History revealed that the patient had no children and no close friends, and that his wife had died eight months earlier. Subsequently he'd become depressed, had lost weight, sleep, energy and all capacity to enjoy things, and four months before seeing his internist he'd taken an overdose of codeine. The patient's past medical history was remarkable for lung cancer, currently in remission with ongoing chemotherapy. During the interview the patient reported he'd given up all hope of ever getting better and that he'd actually felt a little better since deciding to kill himself, and had finalized his will; he had bought a gun and planned to drive to a deserted field and shoot himself in the head. Clearly, such a patient is at very high risk, and should be immediately hospitalized.

On the other "extreme" of risk, consider the case of a 25-year-old black married, devoutly Catholic female who lived at home with her husband and children and who came to the interview at the urging of her friends. History revealed that for the past three months the patient, though not experiencing any recent losses, and in otherwise good health, had become depressed with some loss of sleep, difficulty concentrating, fatigue and an overall sense that life wasn't as enjoyable as it once had been. Although she'd never thought of suicide before and had certainly never made an attempt, she found herself occasionally thinking about suicide since becoming depressed, and had told her closest friends, who promptly encouraged her to get help. During the interview, the patient, though depressed, still had some hope that things might get better; when asked whether she'd actually thought about how she might kill herself, she confessed that she'd imagined taking some over-the-counter sleeping pills and then lying down next to her sleeping husband, and waiting for the pills to work. In this case, the risk of completed suicide is low, and such a patient may reasonably be treated on an outpatient basis.

Certainly, most patients do not fall at these extremes, and with regard to this vast majority which exist in the gray zone of risk assessment, making an estimate as to risk is difficult and anxiety-provoking. Faced with such a difficult clinical problem, many clinicians would like to be able to turn to an algorithm or computer program to assist them in estimating the risk. Unfortunately, however, and despite occasional claims to the contrary, none of these methods have been shown to be reliable, and hence clinical judgment, however inadequate it may feel, must be relied on.

Understandably, clinicians have also hoped that laboratory tests may provide some help, and, although certainly nothing is ready for clinical use, there is some hope that reliable testing may be available in the future. There is strong evidence that serotoninergic functioning is markedly disturbed in those who commit suicide. CSF levels of 5-HIAA, a metabolite of serotonin, are reduced in such patients, whereas the number of 5-HT2A receptors on platelets, which serve as models for neurons, is increased. Although obtaining CSF for the purpose of estimating the risk of suicide is probably not practical, obtaining platelets is routine, and it is conceivable that measuring the density of 5-HT2A receptors on platelets could become another method for estimating the risk of suicide.

TREATMENT

If the risk of suicide is judged to be relatively low, outpatient treatment may be appropriate. Prescriptions for any potentially lethal drugs should be restricted to a nonlethal amount, and the physician must watch for any evidence of "stockpiling." In this vein, if an antidepressant is indicated, one with a low lethality in overdose should be considered, for example an SSRI. Firearms should be disposed of or turned over to others for safekeeping, frequent outpatient sessions should be scheduled, and patients should be instructed to call if they feel unable to control themselves. If the risk is high, the patient should be admitted, preferably to a locked ward; involuntary confinement may be required. Patients should be thoroughly searched for any potential means of destruction, such as pills, knives, rope, and the like. Frequent, direct observation is required, and in some cases continuous observation is indicated. Stockpiling should be carefully guarded against: even a highly skilled nurse may not be able to detect "cheeking" if the patient is clever and determined enough. Given this, liquid concentrates or suspensions may be preferable to tablets.

Concurrent psychiatric and general medical conditions should be aggressively treated, and in this regard it is worthy of note that, in patients with bipolar disorder, lithium greatly reduces the long-term risk of suicide and clozapine reduces the risk of suicide attempts in those with schizophrenia.

BIBLIOGRAPHY

Appleby L. Suicide in psychiatric patients: risk and prevention. *The British Journal of Psychiatry* 1992;161:749–758.

Barraclough B, Bunch J, Nelson B, et al. A hundred cases of suicide: clinical aspects. *The British Journal of Psychiatry* 1974;125:355–373.

Borg SE, Stahl M. Predication of suicide; a prospective study of suicides and controls among psychiatric patients. *Acta Psychiatrica Scandinavica* 1982;65:221–232.

Cheng AT. Mental illness and suicide. A case-control study in east Taiwan. *Archives of General Psychiatry* 1995;52:594–603.

Henriksson MM, Aro HM, Marttunen MJ, et al. Mental disorders and comorbidity in suicide. *The American Journal of Psychiatry* 1993;150: 935–940.

Meltzer HY, Alphs L, Green AI, et al. Clozapine treatment for suicidality in schizophrenia. *Archives of General Psychiatry* 2003;60:82–91.

Michel K. Suicide risk factors: a comparison of suicide attempters with suicide completers. *The British Journal of Psychiatry* 1987;150:78–82.

Murphy GE. Clinical identification of suicidal risk. *Archives of General Psychiatry* 1972;27:356–359.

Nierenberg AA, Gray SM, Grandin LD. Mood disorders and suicide. *The Journal of Clinical Psychiatry* 2001;62(Suppl 25):27–30.

Nordstrom P, Samuelsson M, Asberg M. Survival analysis of suicide risk after attempted suicide. *Acta Psychiatrica Scandinavica* 1995;91: 336–340.

Pandey GN. Altered serotonin function in suicide. Evidence from platelet and neuroendocrine studies. *Annals of the New York Academy of Sciences* 1997;836:182–200.

Roy A. Risk factors for suicide in psychiatric patients. *Archives of General Psychiatry* 1982;39:1089–1095.

Tondo L, Baldassarini RJ. Reduced suicide risk during lithium maintenance treatment. *The Journal of Clinical Psychiatry* 2000;61(Suppl 9):97–104.