Suicide Risk and Psychopharmacology: Assessment and Management of Acute and Chronic Risk Factors

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Completed suicide is the most common fatal complication of psychiatric disorders and their treatment. As a consequence, assessment of risk is a critical task for the psychiatrist or mental health professional. In considering risk, completed suicide needs to be distinguished from suicidal ideation or attempts. Focusing on completed suicide rather than ideation or attempts is a more direct and accurate way of assessing risk of death by suicide. Only about 2% to 3% of patients who attempt suicide have been found to commit suicide in controlled studies; therefore, looking at suicide attempts has significant limitations in assessing overall suicide risk.[1]

It is assumed that suicidal ideation and attempts are predictive of completed suicide. While there are data linking attempts with completed suicide, few data inform us about the predictive value of ideation. In fact, 78% of inpatients who committed suicide denied suicidal ideation during their last communication with a clinician.[2] Therefore, assessment of suicide risk factors is preferable to simply asking patients about suicidal intent. Further, suicide risk assessment should be conducted at critical points of care, such as initial evaluations, when privileges are being changed on inpatient units, and at discharge. Suicide risk assessment is an ongoing process based on changes in patients' status and not an isolated event.

It is important to distinguish between acute and chronic suicide risk because the predictive factors appear to differ. In the only study to differentiate these factors in a prospective way, Fawcett et al.[3] defined the acute suicide risk period for completed suicide as the first year of follow-up after initial assessment. The chronic suicide risk period was described as between 2 and 10 years after assessment. The acute, but not chronic, risk factors described in this study were all in patients with a major affective disorder (bipolar or unipolar), although patients' status at the time of suicide was unknown.[3] Although suicide is a rare and difficult-to-predict event, psychiatrists can make an important impact on patient mortality by identifying and reducing both acute and chronic risk factors for completed suicide. Evaluating the presence or absence of risk factors for suicide is important because it would be nearly impossible to study a treatment effect on suicide rates given the low baseline rate of suicide.

Acute Suicide Risk Factors and Treatment

With regard to acute suicide risk, the only data available regarding completed suicides come from the study by Fawcett et al.[3] In this study, only 6 factors were found to be associated with an increased acute risk of suicide: psychic anxiety, global insomnia, diminished concentration, panic attacks, alcohol abuse, and anhedonia. Fortunately, these are all factors that to varying degrees are modifiable with psychopharmacologic treatment. Although the benzodiazepines have not been proven to alter suicide risk, by successfully treating insomnia, panic attacks, and psychic anxiety they address 3 of the 6 acute risk factors. In addition, to the extent that concentration problems are a by-product of anxiety and insomnia, a fourth risk factor might be addressed. Although there is a theoretical risk of using benzodiazepines in patients with substance abuse histories, most patients who take them for legitimate medical purposes do not abuse them.[4] The benzodiazepine receptor agonists used in the treatment of insomnia may also diminish acute suicide risk by addressing 2 acute factors. They treat insomnia, which may indirectly reduce symptoms of depression and anhedonia.[5]

Although the black box warnings regarding use of antidepressants in children, teenagers, and young adults have led to recent confusion regarding antidepressants and suicide, the treatment of depression lowers suicide rates. This has been demonstrated in epidemiologic studies and comports with the data on acute suicide risk.[6] It is important to recognize that the U.S. Food and Drug Administration (FDA) warnings were based on the spontaneous reports of suicidal ideation and behaviors, or "suicidality."[7] There were no completed suicides in any of the placebo-controlled studies the FDA used in formulating the warnings. After the warnings about antidepressants and increased "suicidality" in people younger than 25, prescriptions for selective serotonin reuptake inhibitors (SSRIs) declined in that age group. Concurrently, the number of completed suicides increased.[8] These data suggest that, at a population-based level, antidepressants may help reduce completed suicide.

Antipsychotics can also be used to reduce acute suicide risk. Because acute psychosis is an acute risk factor, the expedient reduction of psychotic symptoms should be expected to lower acute suicide risk. The effect of antipsychotics on psychic anxiety and agitation is more unpredictable, as they all carry the potential side effect of akathisia, albeit at different rates. A large literature review has demonstrated a higher rate of akathisia with first-generation antipsychotics than with second-generation ones.[9] Patients starting a course of antipsychotic medication should be closely monitored for emergent akathisia and treated with benzodiazepines, β-blockers, a dose adjustment, or a switch in medication as clinically indicated.

Chronic Suicide Risk Factors and Treatment

Chronic suicide risk is more difficult to assess and treat than acute suicide risk, as there are more risk factors and it takes longer to gauge the effectiveness of treatment. Chronic risk factors that may be addressed with pharmacologic treatment include the following Axis I disorders: major depressive disorder, bipolar disorder, schizophrenia, anorexia nervosa, alcohol use disorder, other substance use disorder, cluster B personality disorders, and many comorbid physical illnesses, including chronic pain.[10] All of these conditions have been associated with increased rates of suicide.[10] By treating these illnesses, one can lower the long-term risk of completed suicide from a long-term perspective.

Other chronic risk factors that may be amenable to immediate intervention include impulsivity, aggression, and agitation, which have been shown to increase suicide risk independently of comorbid depression. The SSRIs, valproate, carbamazepine, propranolol, and the atypical antipsychotics have been shown in controlled studies to reduce aggression and hostility.[11–14] Most of the studies in this area have involved treatment of aggression in the context of another underlying psychiatric condition. If the treatment is effective, it may reduce or eliminate a chronic risk factor for suicide.

Fawcett et al.[3] found that the factors associated with an increased risk of suicide in patients with major affective disorders during a

follow-up period of between 2 and 10 years were prior suicide attempts, suicidal ideation, and hopelessness. These findings are noteworthy because this is the only prospective study evaluating chronic risk factors for completed suicide. As described above, the successful treatment of major depressive episodes may address these risk factors.

A few specific treatments have been associated with a reduction in suicide risk. They include 2 medications, lithium and clozapine, and electroconvulsive therapy (ECT).

Large retrospective studies have shown an association between the treatment of unipolar and bipolar affective disorders with lithium and a reduction in suicide.[15] Increased suicide risk in bipolar patients has also been associated with discontinuation of lithium, especially if the discontinuation is abrupt.[16] Similar large studies have demonstrated decreased suicide rates in patients with psychosis treated with clozapine.[17]

In addition to the pharmacologic treatment of depression, ECT may be protective against suicide. In fact, it has been stated that one of the indications for ECT is "acute suicidality,"[18] in part because the effects of ECT occur quickly. ECT has been associated with a reduction in expressed suicidal intent,[19] and ECT is quite effective in treating depressed mood and severe psychomotor agitation, which are 2 acute suicide risk factors. Yet, no data supporting a reduction in completed suicide with ECT have been reported.[20]

There are also psychosocial risk factors for suicide that can be addressed through psychological and nonpharmacologic means. The risk factors include a lack of social supports, unemployment, a recent stressful life event, a drop in socioeconomic status, and access to firearms.[10] Similarly, there are psychosocial factors that are protective against suicide. These include the following: children in the home, pregnancy, religiosity, life satisfaction, and positive social supports.[10] By enhancing these factors in patients' lives, the suicide risk can also be reduced, especially with regard to removing lethal means such as firearms.

Conclusion

Because suicide is fortunately a rare event, measuring and modifying its risk is challenging. Given the low rate of suicide, very large numbers of patients would be required to prospectively demonstrate a reduction in suicide with any given treatment. However, the pharmacologic and other interventions mentioned above can diminish the risk factors for suicide and therefore should be protective. As can be learned from the recent problems surrounding the well-intentioned FDA warnings of increased "suicidality" with antidepressants, a large amount of humility is required in studying suicide. Yet, there is reason to be optimistic. In small but important increments, we have gained a better understanding of the risk factors associated with suicide. By addressing these risk factors, psychiatrists and other clinicians can make an impact on patients' lives in the most profound way.

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